VOL. XLVI. No. 3 MARCH 1961

MECCANO MAGAZINE

1/3

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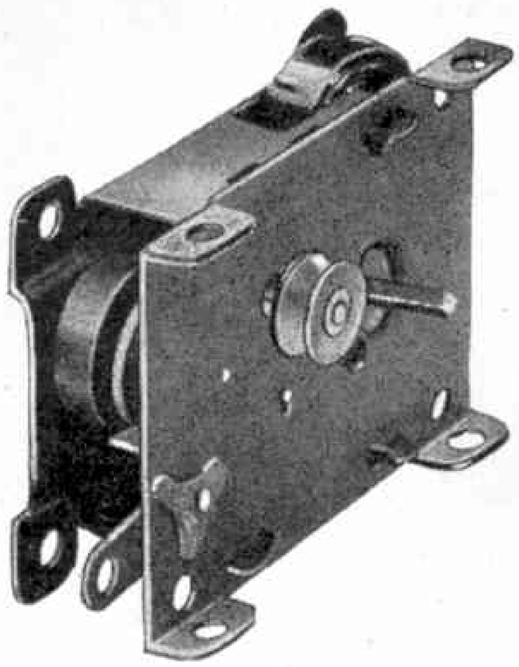

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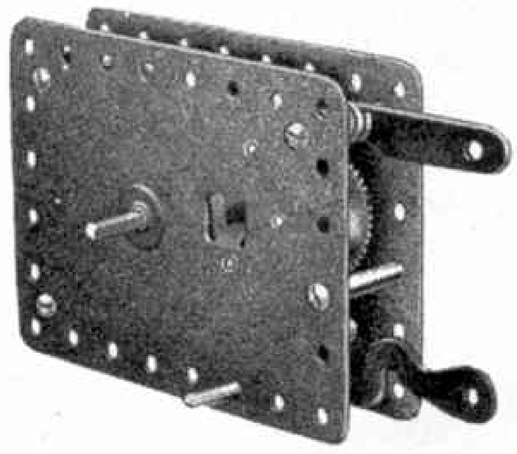

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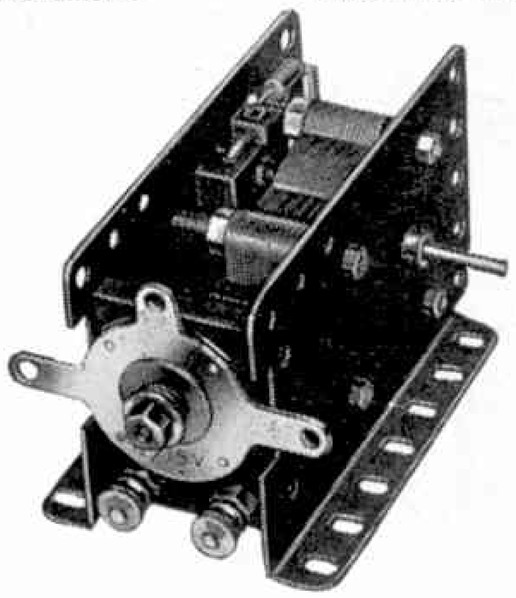

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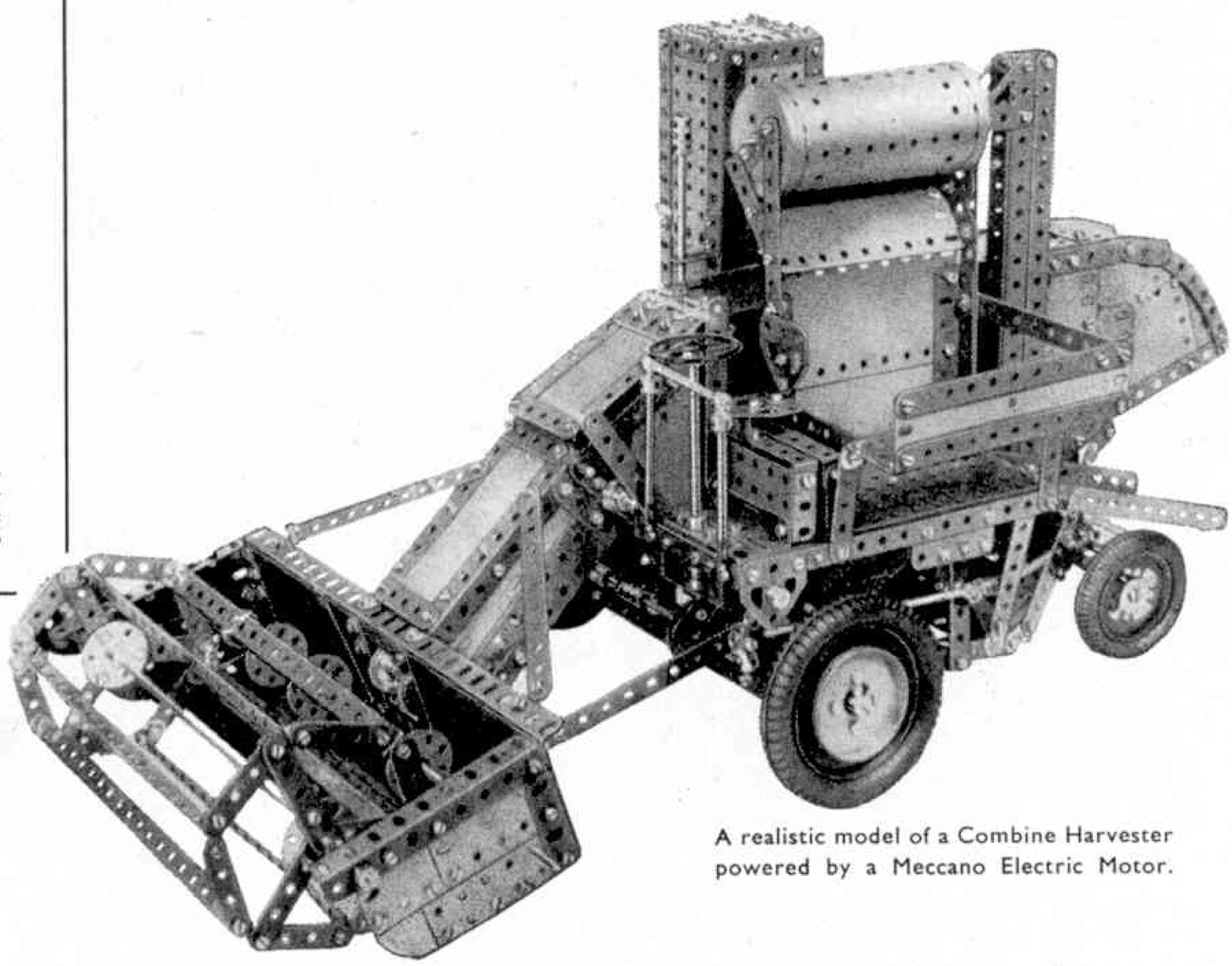

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27/6

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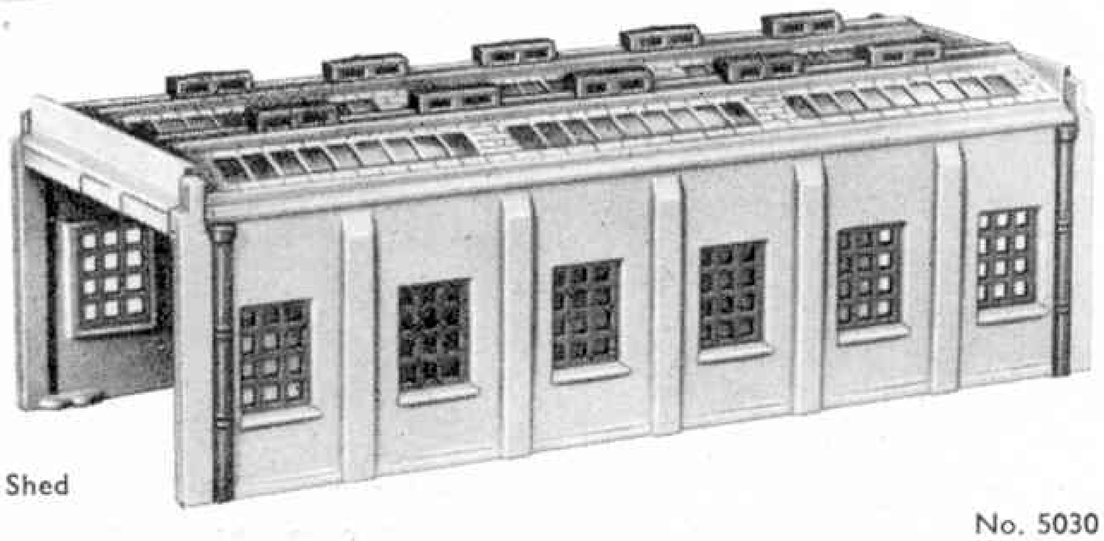

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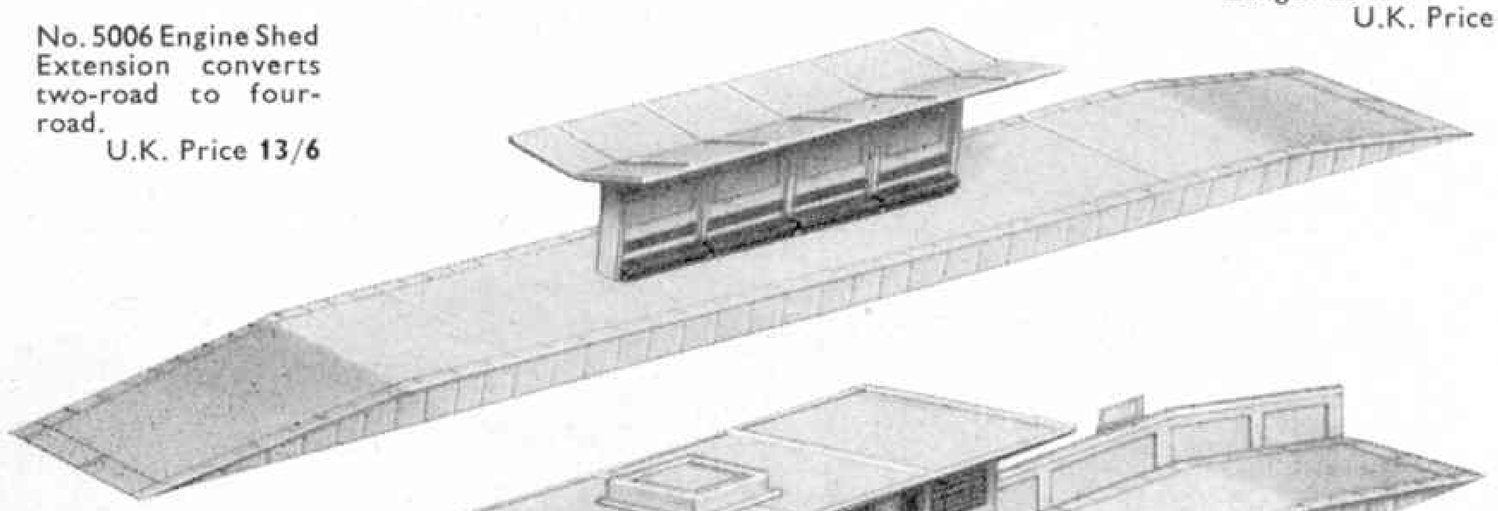

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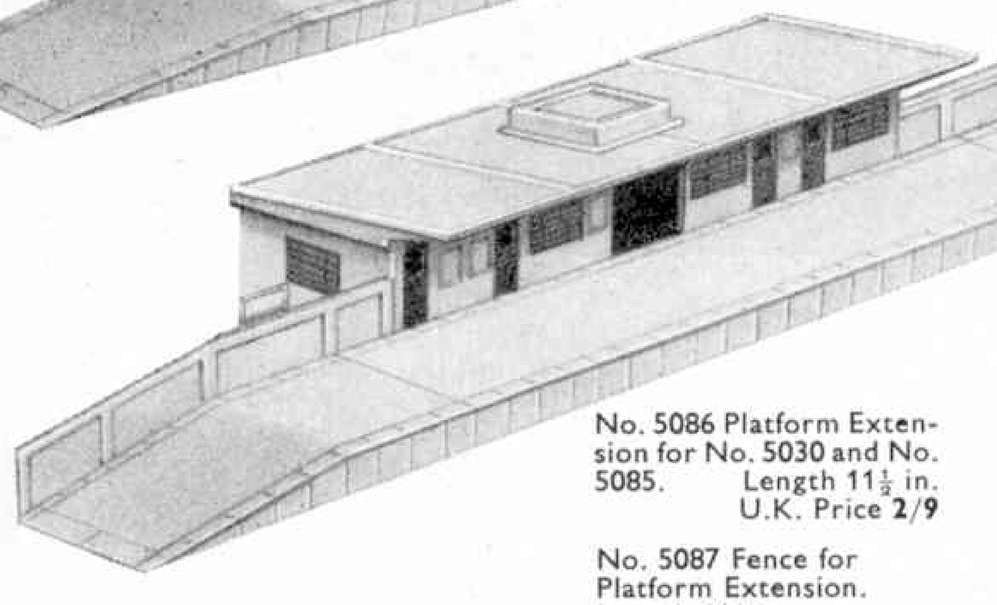

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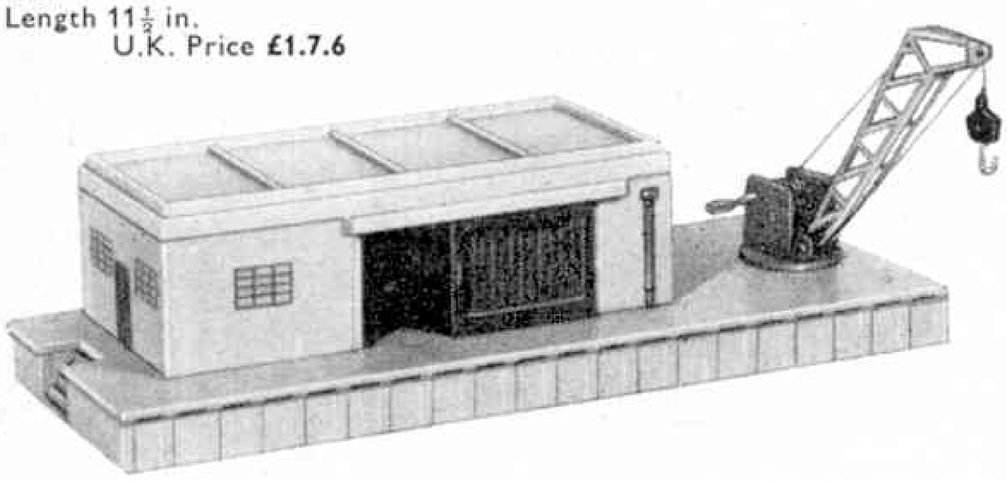

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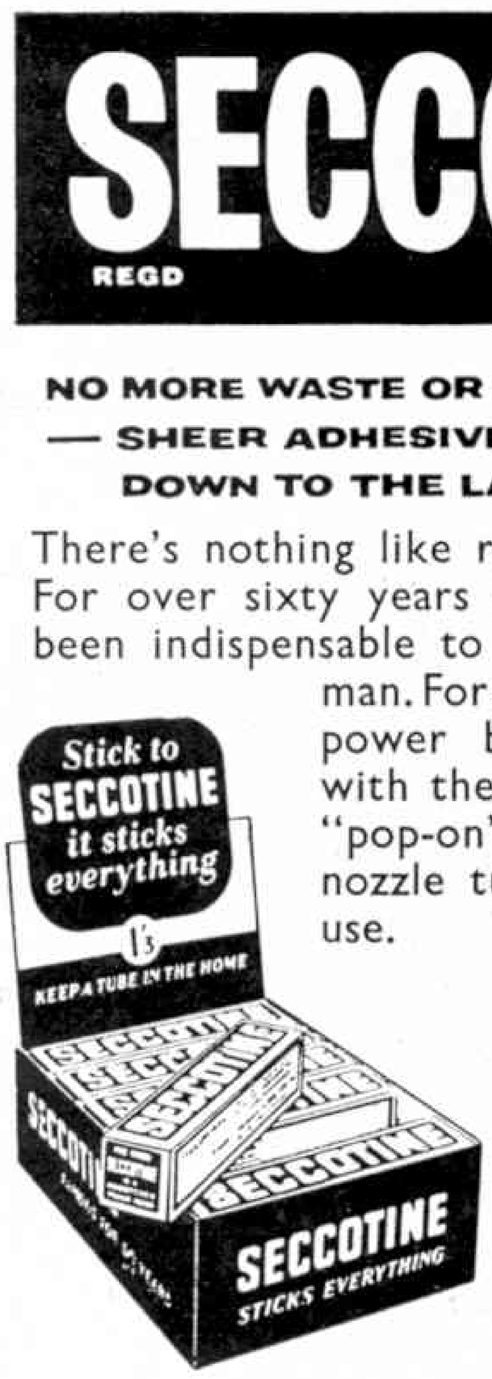

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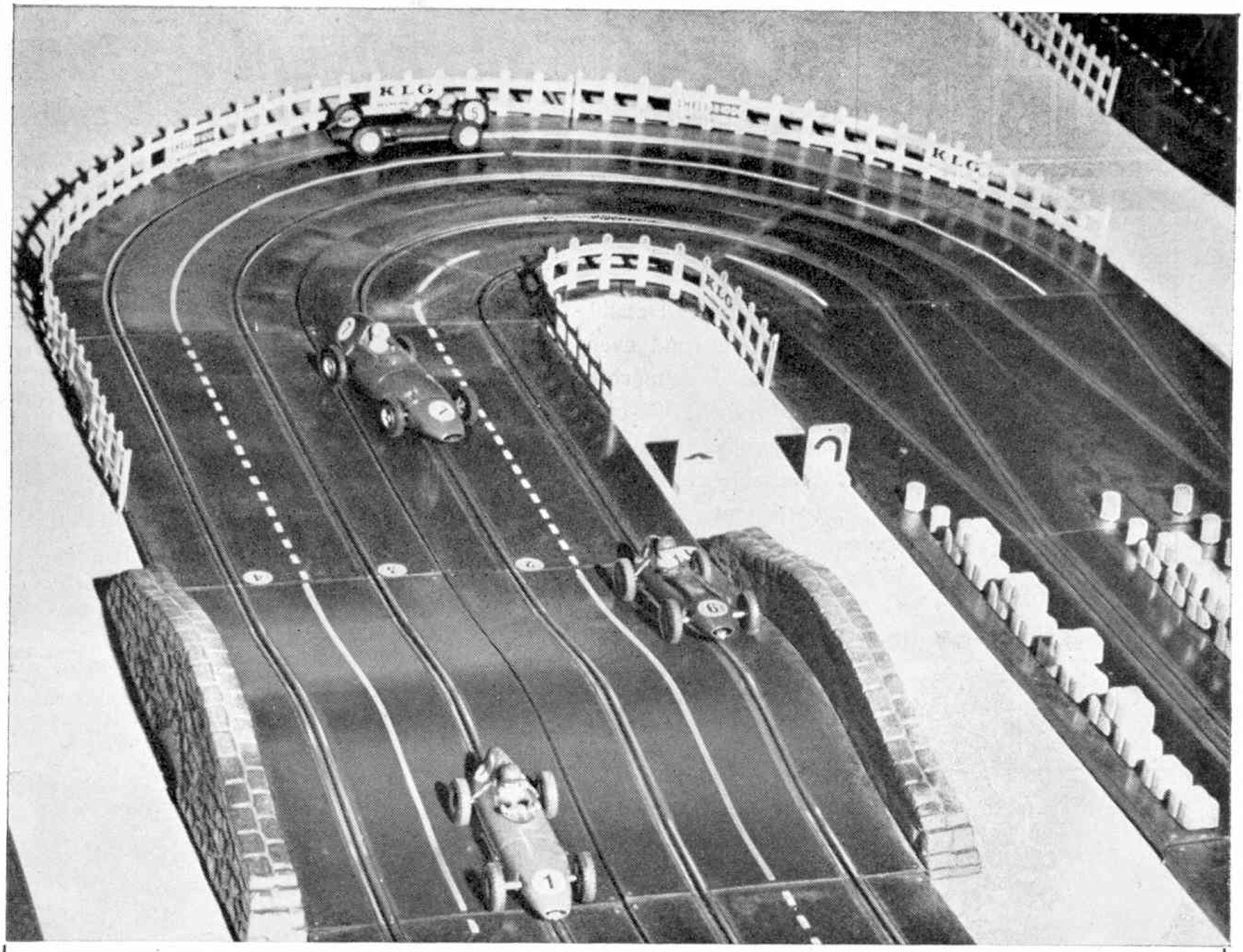

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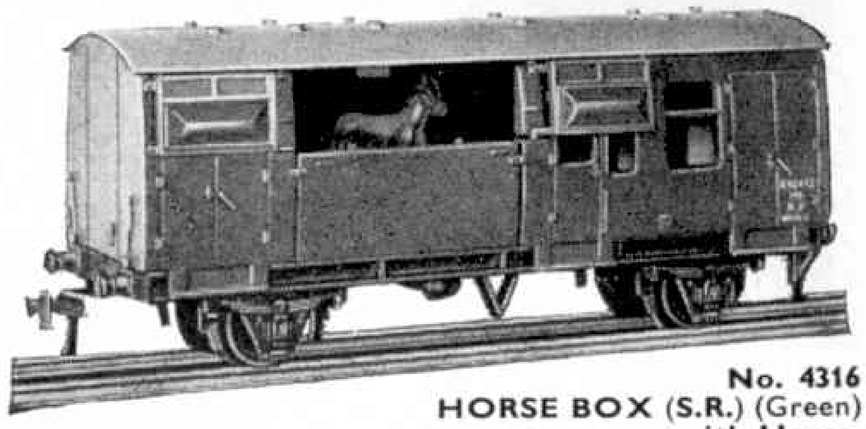

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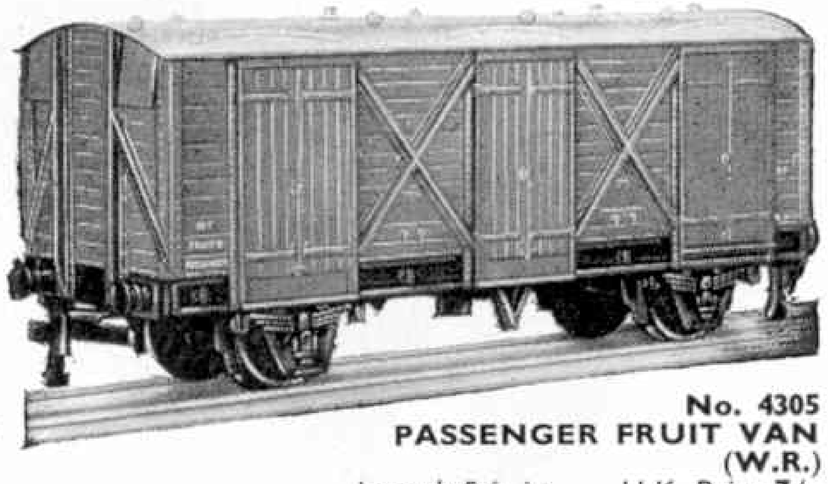

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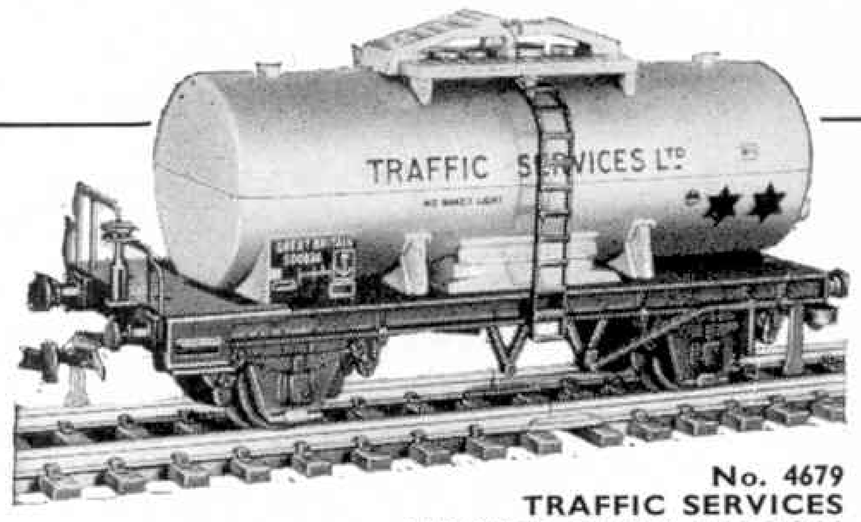

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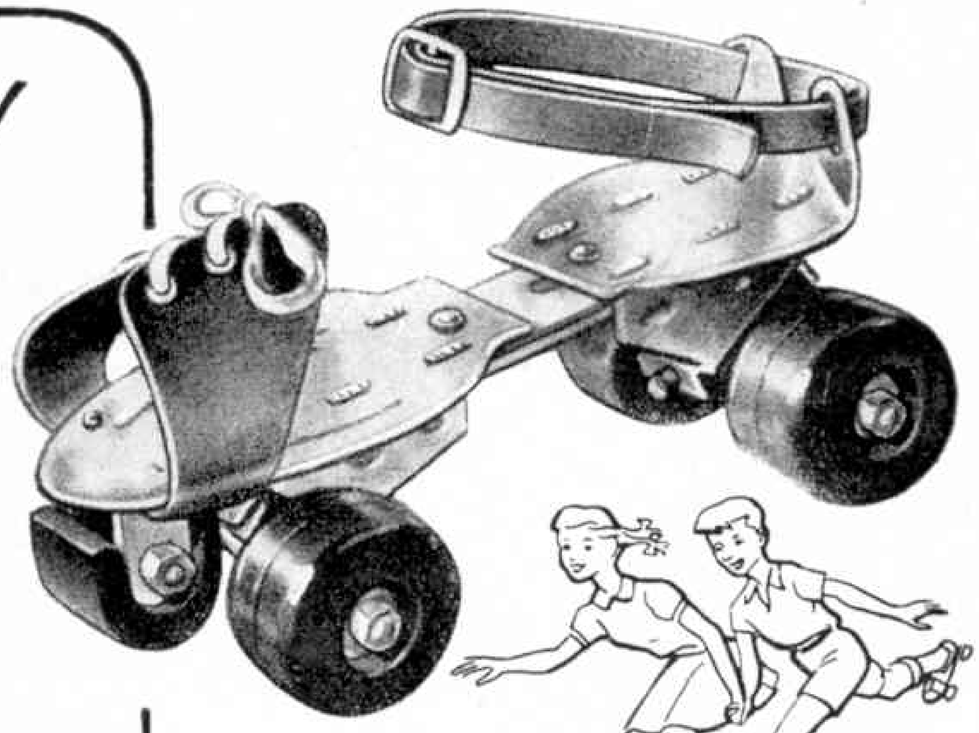

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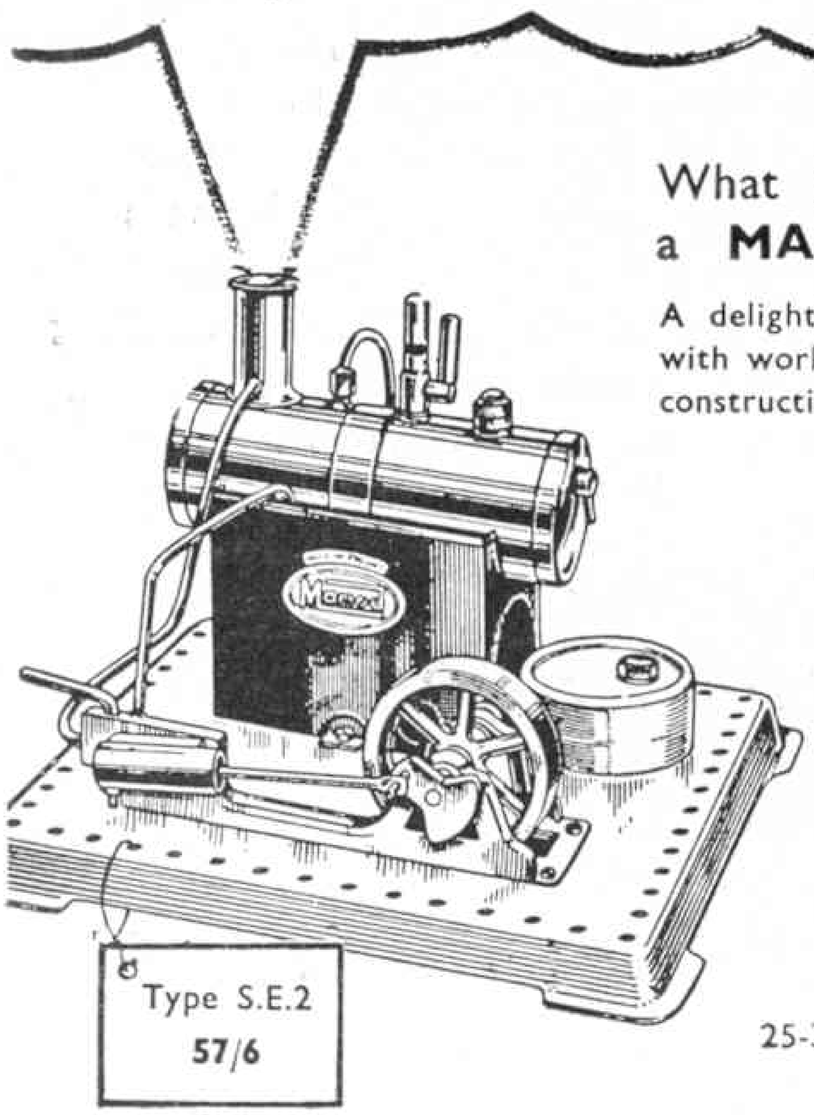

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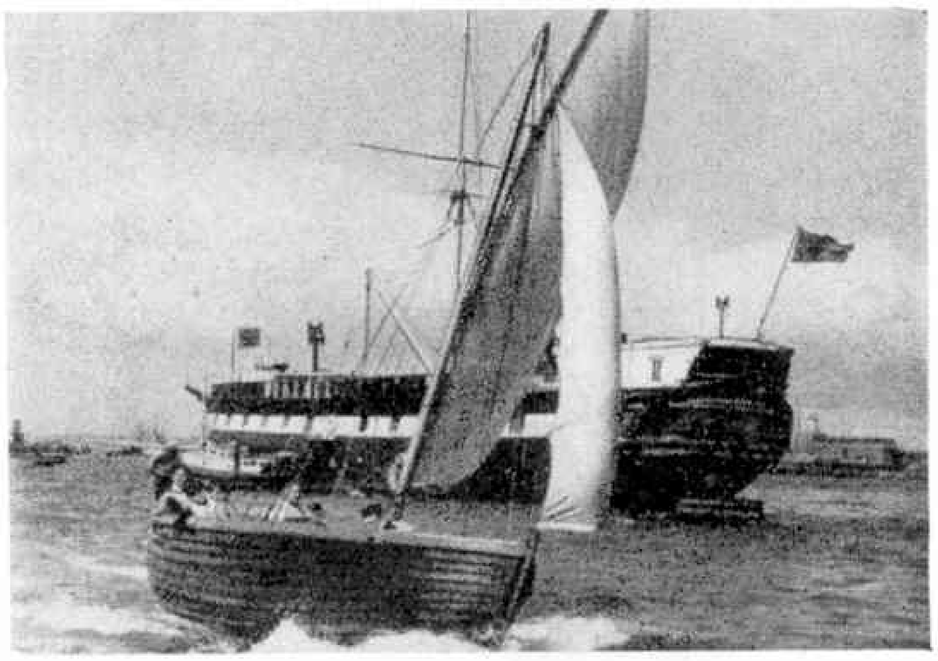

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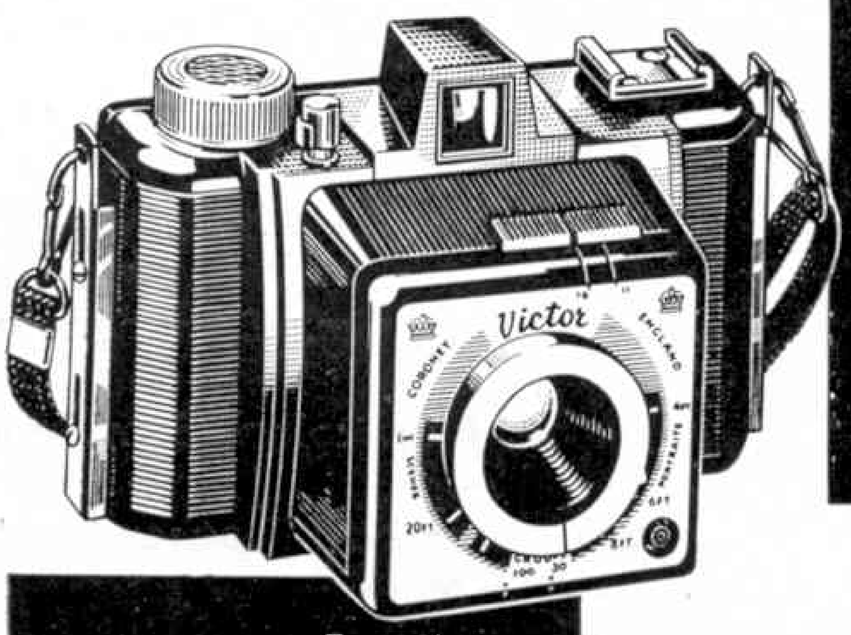

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MECCANO MAGAZINE

Volume XLVI **No. 3** **March 1961**

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ERNEST MILLER

A Word Of Thanks To Our Readers

MY first duty this month must be to thank all those who have sent, to Binns Road, congratulatory messages about the new-size *Meccano Magazine*. Although you will find a further reference to this subject on this month's Readers' Page—where a selection of letters about the new *M.M.* appears—I do want to take the opportunity of expressing in these notes my sincere thanks, and those of the *Meccano Magazine* staff, to all who by letter and telephone have sent their good wishes for the new venture. Although I have tried to answer all my correspondents individually, I have not previously been able to acknowledge their interest and support in the Magazine itself, since it is prepared some weeks ahead of publication date. It is very heartening to find a major change of this nature meeting with such all-round approval.

Now to the somewhat unusual picture I have selected for this month's illustration. When the question was posed, "How can a 350-foot length of pipe be moved from the factory where it was made to a railway goods yard nearby?" the answer—despite this age of mechanisation in which we live—was "Get 55 men to carry it on their shoulders." And that is what was done by the plastics firm in Holland who manufactured this monster pipe. You can see from the picture how people on the route enjoyed the march of the 55 men.

The pipe, made by the Wavin company of Hardenberg for the N.A.M. oil-producing company, was needed to drain off the salt water which is produced with the oil from wells near Rotterdam. The seven-inch diameter pipe was made in one piece to prevent possible leakages which might harm surrounding agricultural land. The length created many problems. At the factory a hole had to be knocked in the wall as the pipe grew longer and longer, and before it was finished it stretched right out of the factory grounds, over a hen-run and into a barley field.

THE EDITOR

Next Month: A TALE OF TEN SHIPS

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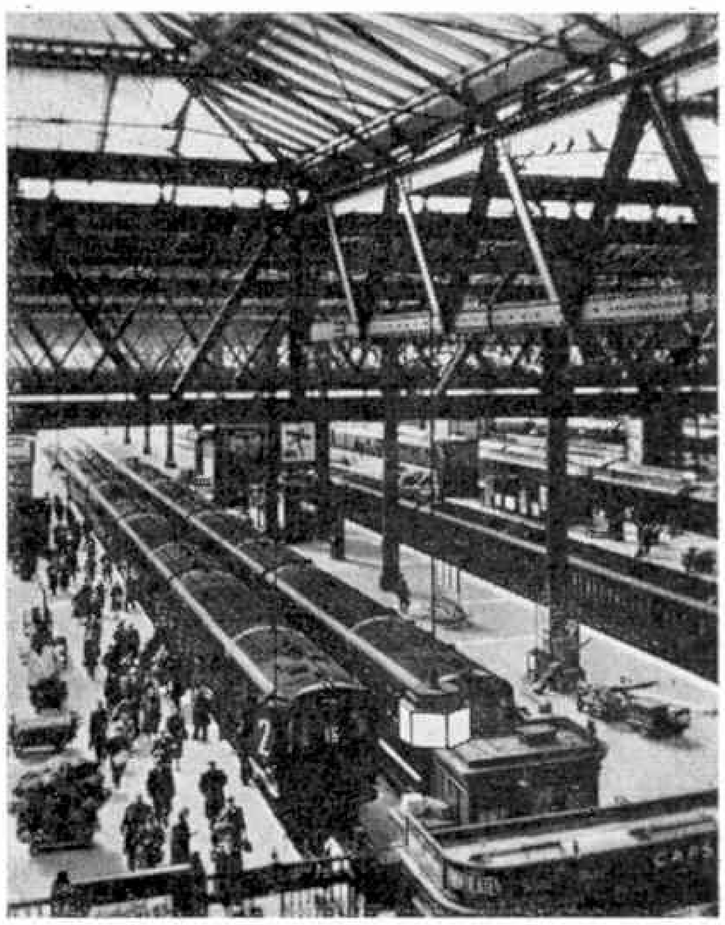
OUR FRONT COVER

Our cover this month, prepared from a B.R. Southern Region photograph, shows part of the interior of Waterloo Station, London, which has the largest number of platforms of any station on British Railways. There are, in fact, 21 platforms in the main station. Waterloo covers 24½ acres and is capable of handling 1,700 trains in a day.

The scene is early afternoon and the Southern Electric train just arrived at Platform 2 has brought up to Town passengers bent on business, pleasure or, just afternoon shopping. There is a fair number of them but they are a handful compared with the many who travel at peak hours.



The House That Downing Built

FEW—if any—of the world's residences can boast of such international fame as No. 10 Downing Street, the official home of Britain's Prime Minister. To add to its distinction, architects and builders are now carrying out a costly reconstruction to make the building safe and prevent it from collapsing.

The rebuilding will not greatly affect the interior; the Cabinet room and other famous parts of the house will remain unchanged.

By
LESLIE E. WELLS

There can be few London buildings on which more money per foot of frontage has been spent. So shoddy was its original construction that almost every decade has produced a repair bill of several thousand pounds.

Curiously enough, the 250-years-old houses in Downing Street owe their origin to the enterprise of a man who was a traitor to his cause, Sir George Downing, whom his contemporary, Samuel Pepys, described as "a parfidious rogue". He was the nephew of the Governor of Massachusetts, and was one of the first graduates of Harvard University, where he tutored for a time before returning to England to become Scoutmaster, or Chief Intelligence Officer, in Oliver Cromwell's army.

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With the Restoration of Charles II, Downing—a whole-hearted turncoat—made his peace with the king, and, in return for betraying the names of three of the men who signed Charles I's death warrant (one of them was Downing's old colonel), was granted a baronetcy and the lease of the land on which Downing Street now stands. The land was parcelled out into building plots, and most of the gardens and pleasant walks disappeared.

The site of No. 10 remained undeveloped until the first house was built there in the reign of Elizabeth I. It was from this house in 1605 that the occupier, a Court official and magistrate, was called to the cellar adjoining the House of Lords to arrest Guy Fawkes, sitting on his kegs of gunpowder. Thus was the Gunpowder Plot frustrated.

The house was known until 1825 as No. 5 and was subsequently occupied successively by Lord Lichfield (a Jacobite), Count d'Auverquerque (William III's Master of the Horse), and Baron Bothmar (the Hanoverian Minister).

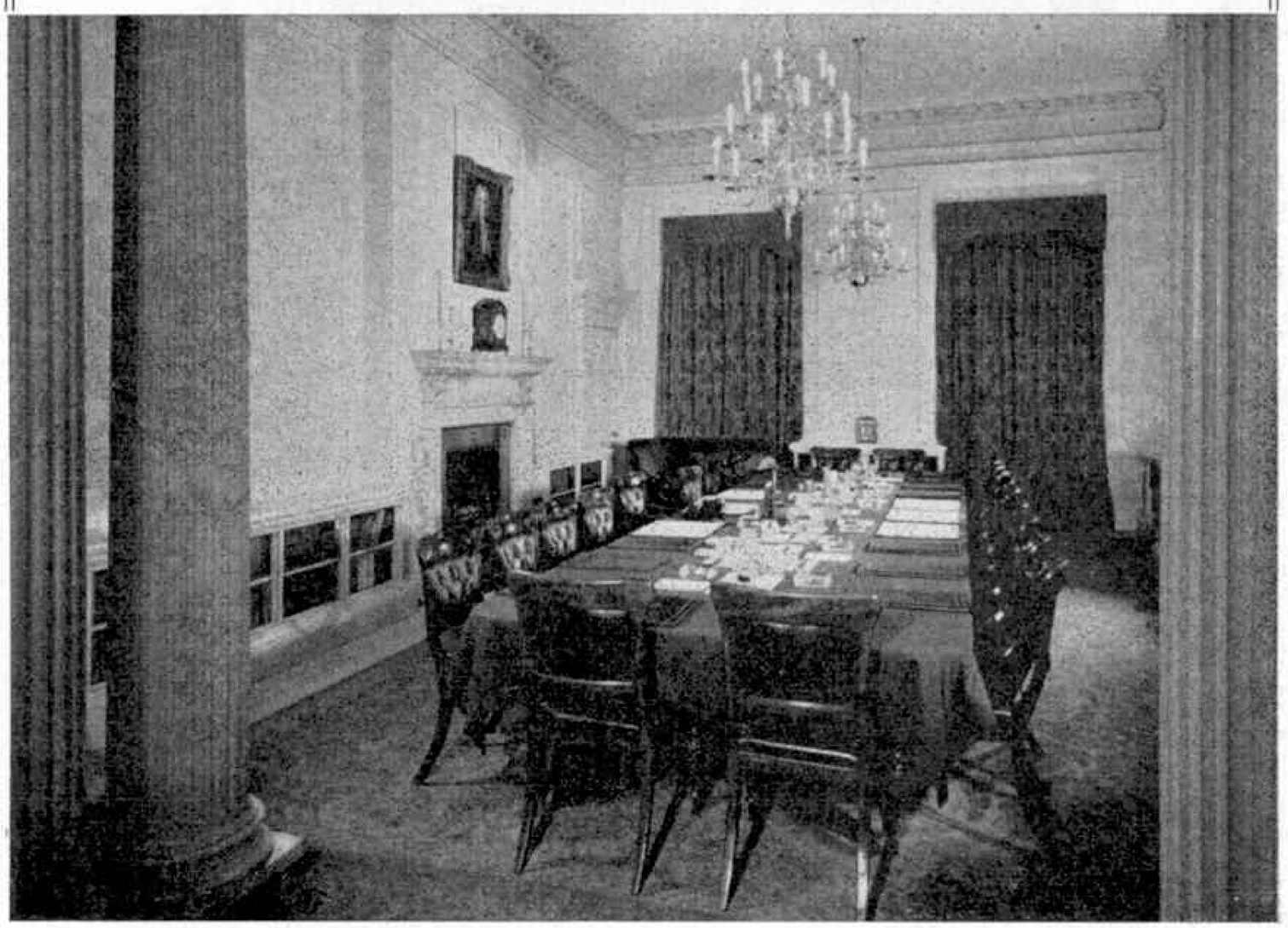
* * * *

Then, in 1731, George II offered it to Sir Robert Walpole, his Prime Minister, as a gift. He accepted on condition that it became the perpetual residence of the First Lord of the Treasury.

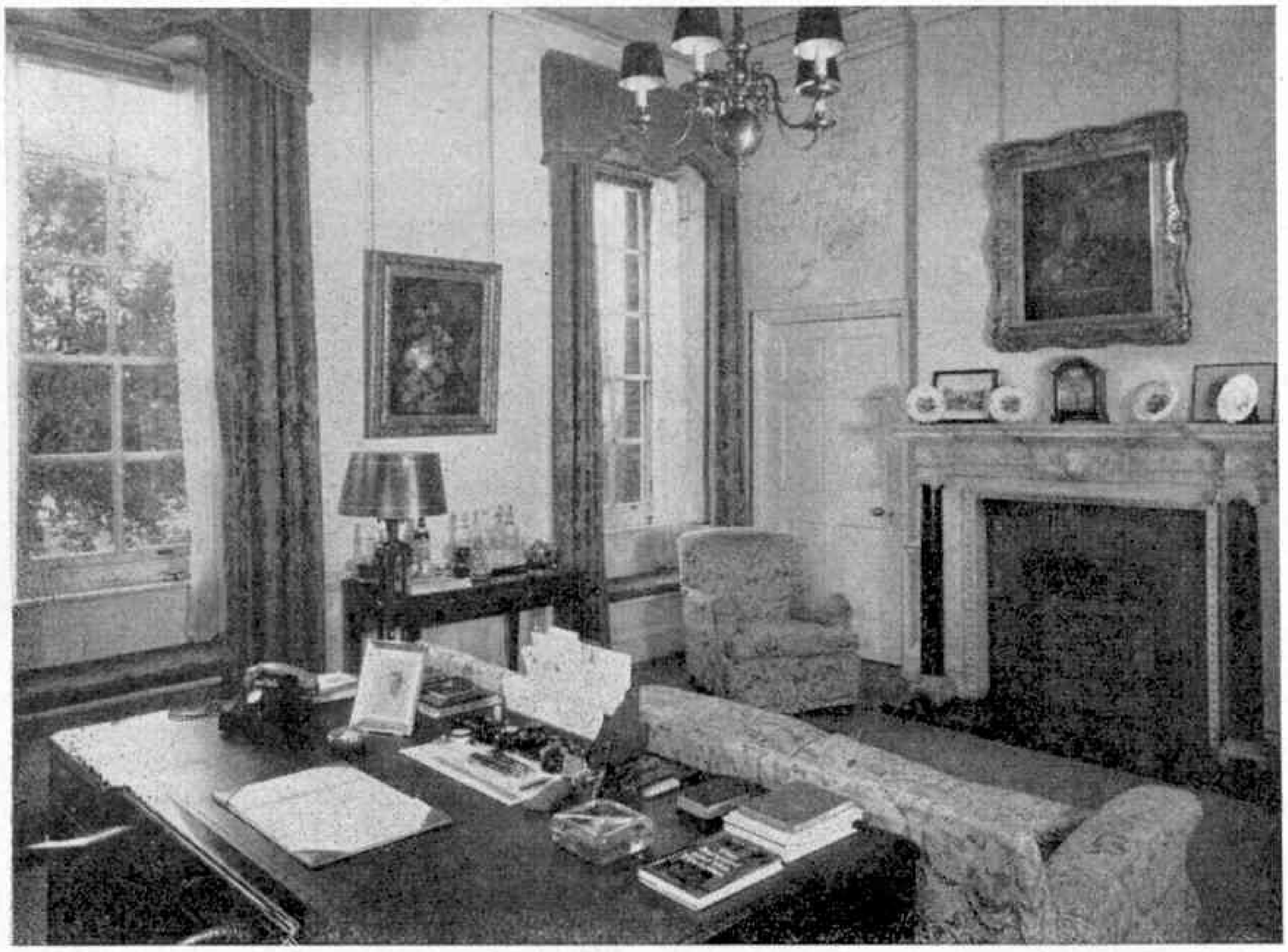
Walpole lived in the house for some years (his son, Horace Walpole, one of our great letter writers, dates more than one letter from No. 10—"I am willing to enjoy this sweet corner while I may", he says in one of them—and up to 1834 it was the practice for most First Lords of the Treasury to take up residence there on their appointment.

After 1834, although No. 10 was used as an office and for receptions, First Lords of the Treasury did not always live there. Lord Melbourne, Sir Robert Peel. Palmerston and Lord John Russell continued to occupy their former London homes. Lord Beaconsfield did not move to Downing Street until his party returned to power in 1877, and Gladstone never used No. 10 as a home until 1880. Since then each Prime Minister, on coming into

WHERE THE CABINET MEETS



The historic Cabinet Room (right) and (above) the famous front door of No. 10. These pictures are reproduced by courtesy of the Ministry of Works and the Radio Times Hulton Picture Library respectively.



(Left) The Prime Minister's study on the first floor: Ministry of Works picture. (Bottom, left) This old print shows No. 10 in the days when it was the office of the First Lord of the Treasury. (Right) The house as it is today. The two last-named illustrations are by courtesy of Radio Times Hulton Picture Library.

office, automatically takes up residence in this historic house.

No. 10 is a three-storeyed house with a basement. The front door, with its well-polished lion's-head brass knocker, leads into a hall paved with squares of black and white marble; a double door gives on to a corridor leading to the Cabinet Room at the back of the house, and there is a passage which joins No. 10 to No. 11, the residence of the Chancellor of the Exchequer. The Cabinet Room—40 feet long by 20 feet wide—has panelled walls, a carved grey marble mantel, tall bookcases and folding doors which open on to a terrace. The long table, covered with worn baize, seats 22 people and it is here that the Cabinet meet for their deliberations. The only picture in the room is Van Loo's portrait of Walpole.

The bookcases hold a remarkable library. Each volume has been presented, with an autographed bookplate, by a Cabinet Minister. If possible, Ministers present their own works; Sir Winston Churchill is one who has had no difficulty here. Some may find other choices significant. Sir Stafford Cripps chose William Morris; Lord Hewart, Aristotle; Lord Thurso, Izaak Walton; Sir Hartley Shawcross, Coleridge; Lord Jowett, Keats.

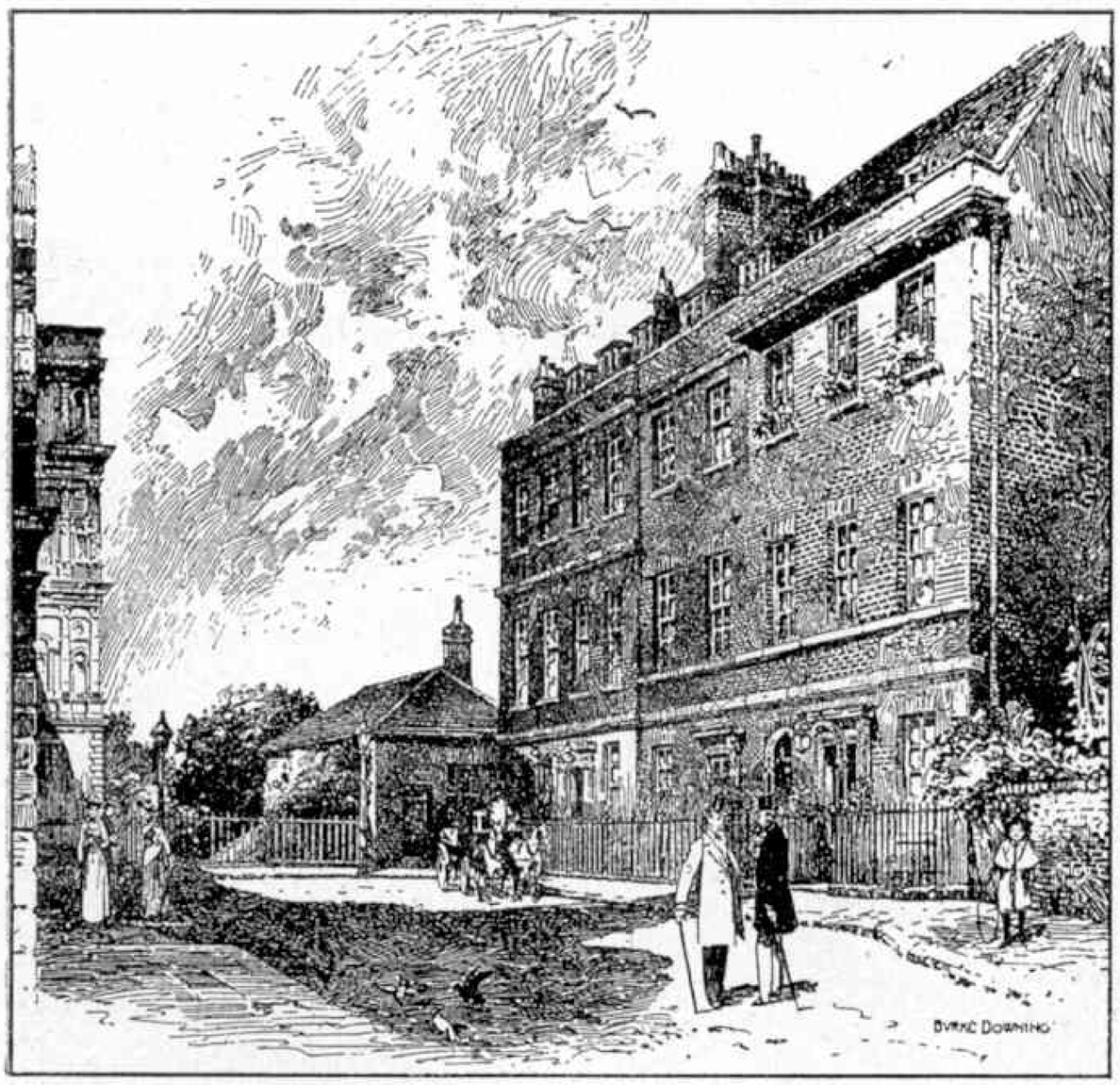
Above the Cabinet Room and secretaries' offices are a series of State rooms. In 1945, Lord Attlee found them "not very suited to family life in the present age" and retreated to a flat on the top floor. Other tenants of No. 10 have delighted in their elegance, particularly in Soane's dining-room and Kent's furniture.

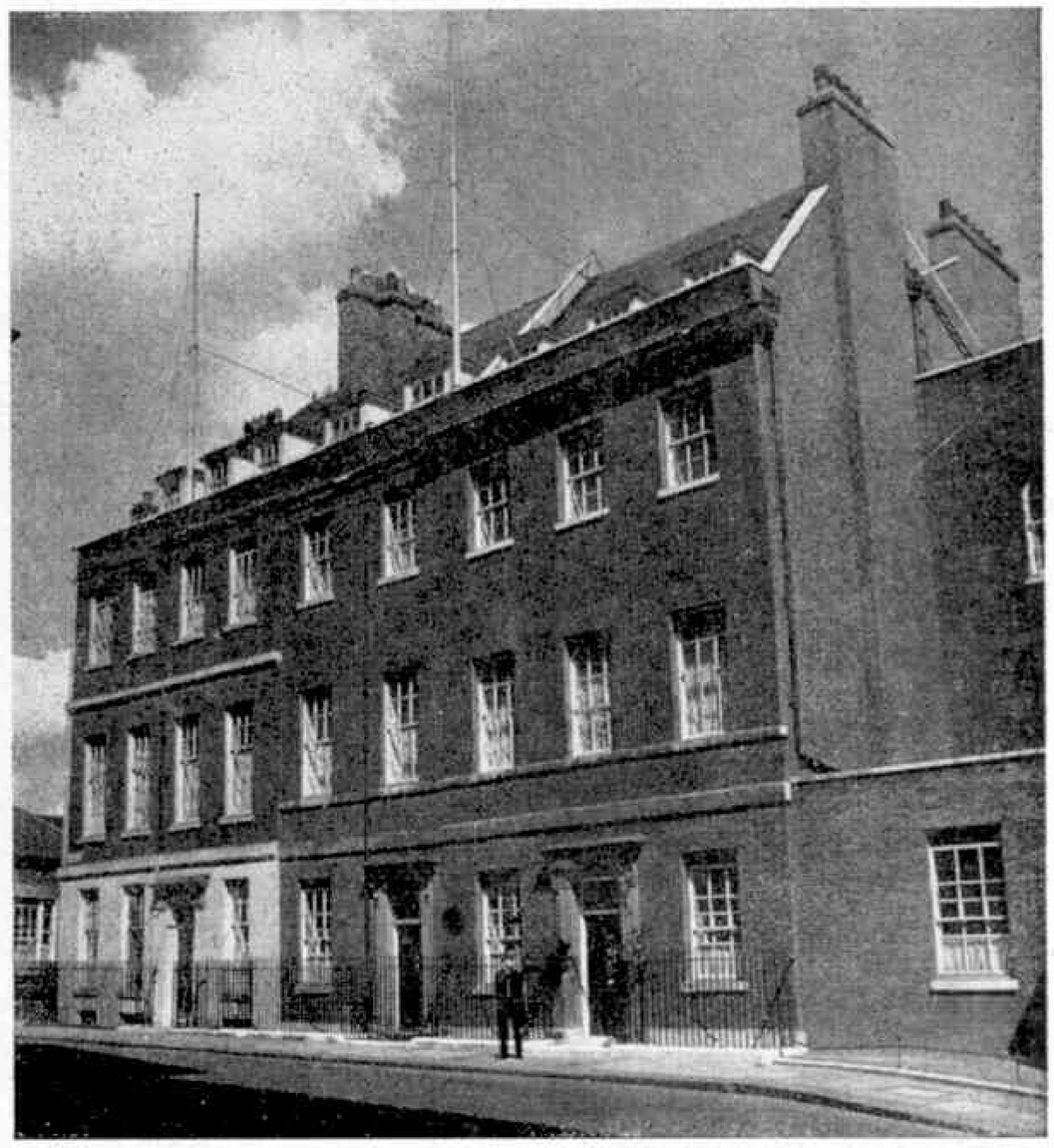
* * * *

No. 10 has two dining-rooms and two drawing-rooms. One of each is used only for official occasions—the oak-panelled State dining-room has received the Queen and other royalty entertained by the Prime Minister of the day. The private rooms are, of course, for the personal use of the Premier and his family. The bedrooms are unexpectedly and delightfully homely with their sloping attic ceilings. There are three bathrooms with coloured porcelain baths and basins.

The kitchen is in the basement and so, too, is the most impressive object in the house. Here, in beautifully-cut letters, is a tablet that tells us:

"*In this room during the Second World War His Majesty the King was graciously pleased to dine on fourteen occasions with the Prime Minister, Mr. Churchill, the Deputy Prime Minister, Mr. Attlee, and some of their principal colleagues in the National Government and various high commanders of the British and United States Forces.* (*Continued on page 110*)





KEEP ON THE RIGHT SIDE OF THE TRACK

Advises R. W. Drummond

● The gradual change-over by British Railways from steam to diesel and electric trains has brought with it certain dangers for the unwary. Inexperienced train spotters and experienced railwaymen should realise fully what these dangers are. In this article, a member of the British Transport Commission Public Relations staff tells you, in straightforward fashion, how to observe commonsense precautions when in the vicinity of the lineside.

IN an age of change, there is a good deal more for the railway enthusiast to watch out for on British Railways nowadays—in more senses than one. New electric and diesel locomotives are already handling more passenger traffic than steam.

It takes a keen ear and good sight to detect these new "kings of the iron road" for they combine speed with silence.

This is a sign that is going up wherever the new electric railways are operating. It means what it says.

To young train spotters they bring new thrills, new recognition marks, but they also bring new risks which must be known and appreciated. Even railwaymen who have spent a lifetime working on the line must sharpen their awareness of danger, for the risk of an electric or diesel train bearing down, almost silently, at speeds reaching nearly 100 m.p.h. is far too real to be ignored.

In the newly-electrified areas of the country—on some eastern lines out of London and in the Glasgow and Manchester–Crewe–Liverpool districts—there is the new overhead equipment carrying 25,000 volts to watch out for and treat with respect. This is a great deal of electricity when you remember that most houses manage with only about 250 volts and the majority of cars function perfectly well on twelve.

But the danger is only *on the railway side of the fence*. The cables and equipment are carefully placed out of ordinary reach—and, well, it is only sensible to stay away from them.

Test with Dummies

The overhead electrification is also something new for the majority of railwaymen in this country, and because of this the British Transport Commission held a special demonstration to show the men who operate the system just how safe it is—provided they know the equipment is there, *and* leave it alone except when carrying out properly supervised maintenance.

The demonstration, staged by the Commission at Colchester (St. Botolph's) Station in the Eastern Region, was watched by Ministry of Transport officials, railwaymen and trade union representatives.

The tests were carried out with a steam locomotive and dummy men. Throughout the demonstration the locomotive was allowed to emit as much smoke as possible with the blower on—for flash-over (the technical term which is now railwayese for electricity sparking across a gap) is more likely to occur over a greater distance under this condition than in clean, dry air.

In the first test a man stood with one foot on a steel plate on the platform and the other on the locomotive. A wire was then connected from the plate to the running rail to produce the same conditions as a man standing directly on the rail. His hands were on the handrail of the locomotive. Others stood directly on the platform, also holding the handrail of the locomotive, and another man was on the footplate.

The current was then switched on and the cable was gradually lowered. It was not until the cable was a few inches away from the chimney of the locomotive that a

The new 90 m.p.h. diesel Pullmans are worth looking out for—but from the best vantage point, on the *right* side of the fence.

flash-over occurred. All the men were perfectly safe because the current went directly to earth through the locomotive.

In another test a dummy man (provided with the same electrical resistance as a real person) was placed astride the boiler of the locomotive facing the chimney, in a slumped, forward position. The current was again switched on and the dummy was brought up into a sitting position. It was not until his head was very near to the cable that a flash-over occurred. Another test was carried out with a dummy on top of the coal in the tender, with similar results.

Finally, high-voltage surges were applied to the overhead lines to obtain similar conditions to those encountered during a thunderstorm, while men stood in the cab and on the platform holding the locomotive handrail. They were unharmed.

The tests had proved that there was absolutely no danger to a passenger or any person going about his lawful business, or to railwaymen, as long as the safety rules were obeyed.

However, there is no need for the train spotter to be near the cables at any time. Climbing electrification masts, or clambering on to a footbridge parapet or the top of a coach, to get nearer the wire, is just as dangerous as to step on the third rail on existing electrified lines.

For, as the tests showed, it is not necessary actually to touch the wires, either with the body or with anything long handled like a fishing rod, to induce a flash-over. Children may sometimes see railwaymen working on the overhead structures. That does not mean the wires are safe—the current will have been switched off.

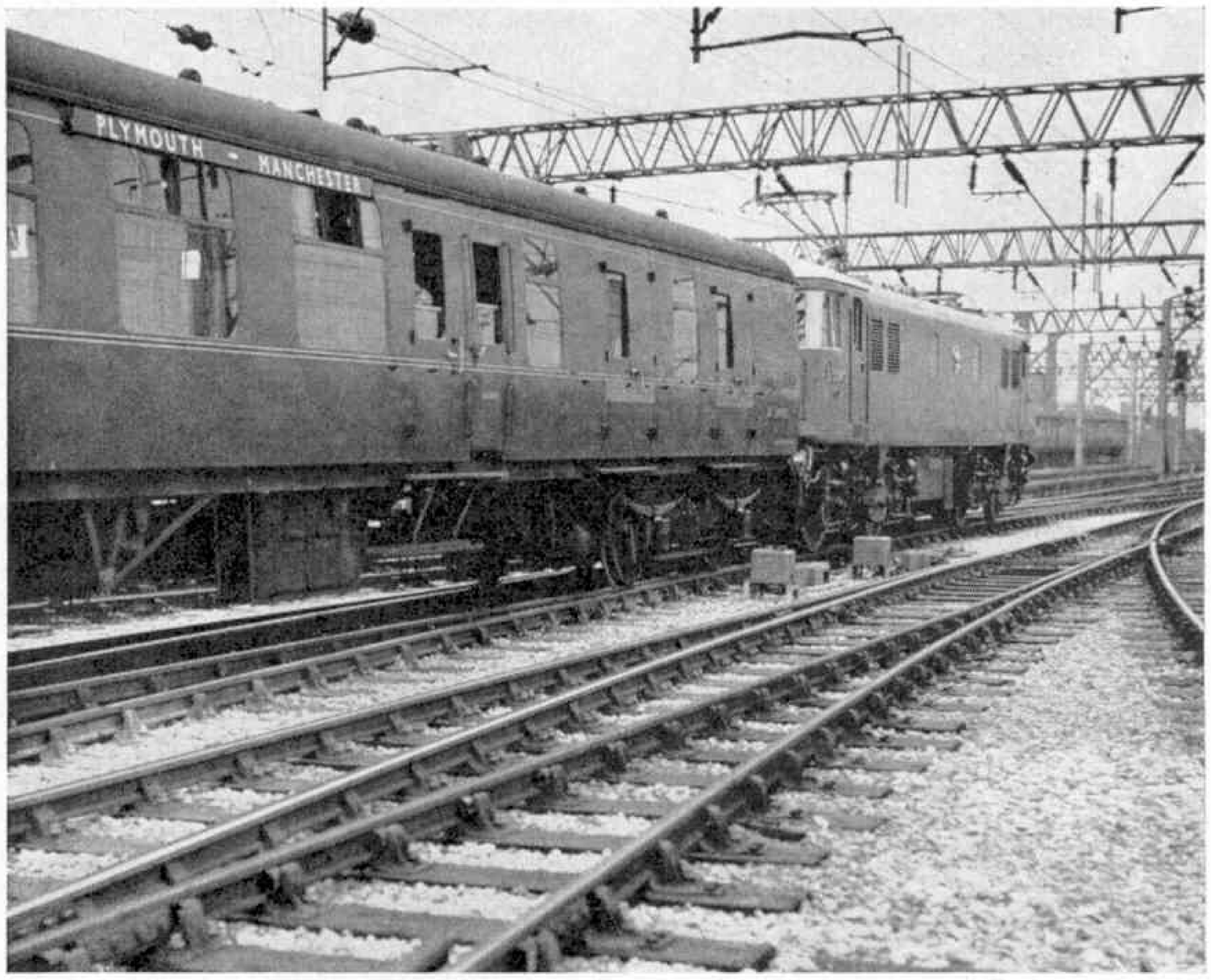
But the new dangers are not confined entirely to the electrified areas. Great care is also needed in areas where the new diesel locomotives and multiple-unit trains are operating.

Already many of the principal passenger expresses running every day out of the major cities are being hauled by diesels. The 3,300 h.p. Co–Co Deltics, among the world's most powerful single-unit diesel locomotives, are now coming into service. Altogether, 22 of them will cope with the work at present handled by 55 steam locomotives on the East Coast main line between London (King's Cross) and Edinburgh, and they will haul such well-known trains as *The Flying Scotsman*, *The Elizabethan*, *The Talisman* and the *Tees-Tyne Pullman*.

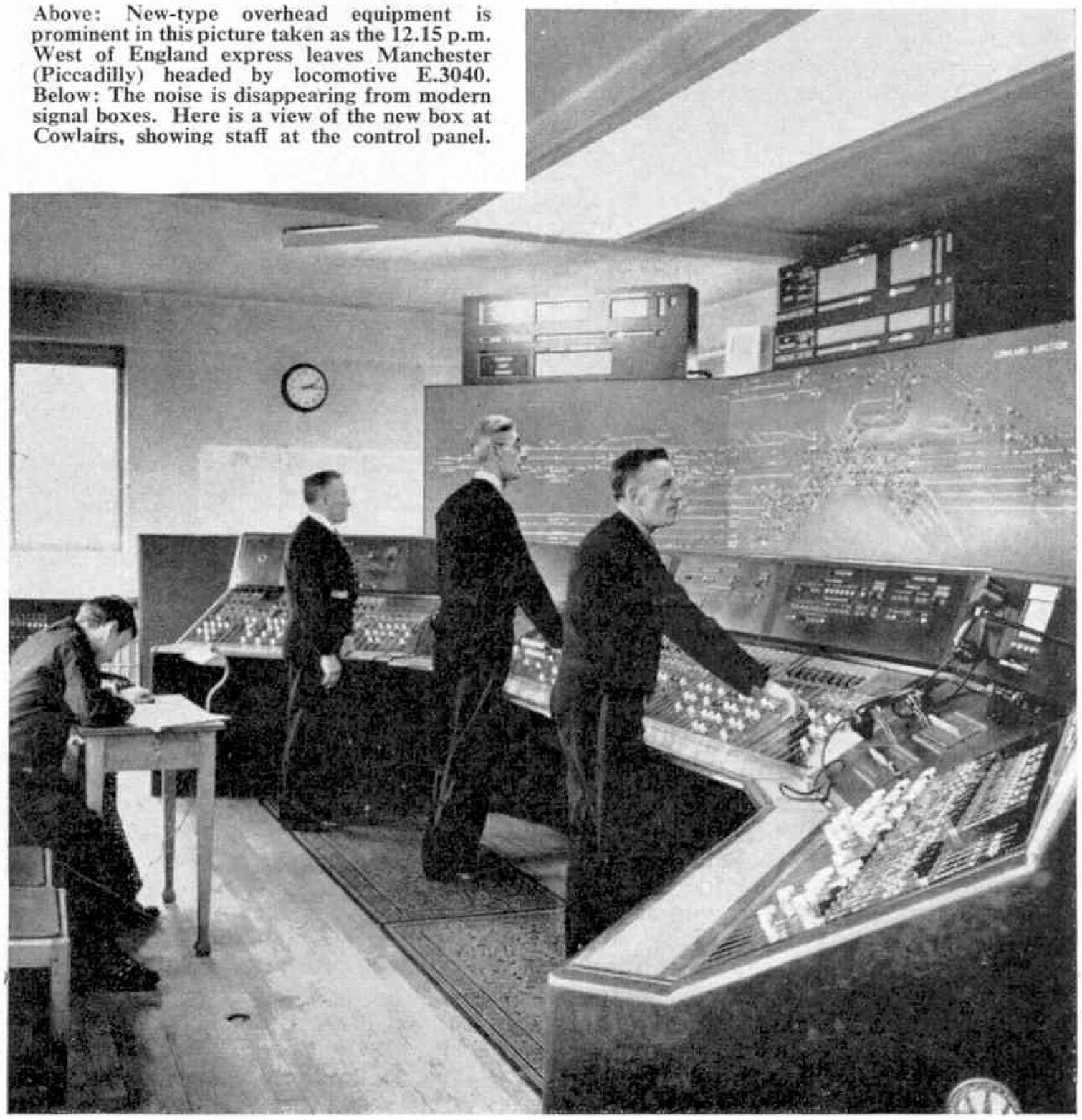
Keen railway enthusiasts will not want to miss the new de-luxe Pullman expresses, which are daily streaking at speeds around 90 m.p.h. linking London with Manchester, with Bristol and Bath, and Birmingham and Wolverhampton. Streamlined from nose to tail, these trains, in smart blue and white livery, are fully air-conditioned

(*Continued on page 110*)

All pictures used to illustrate this article are reproduced by courtesy of British Railways.



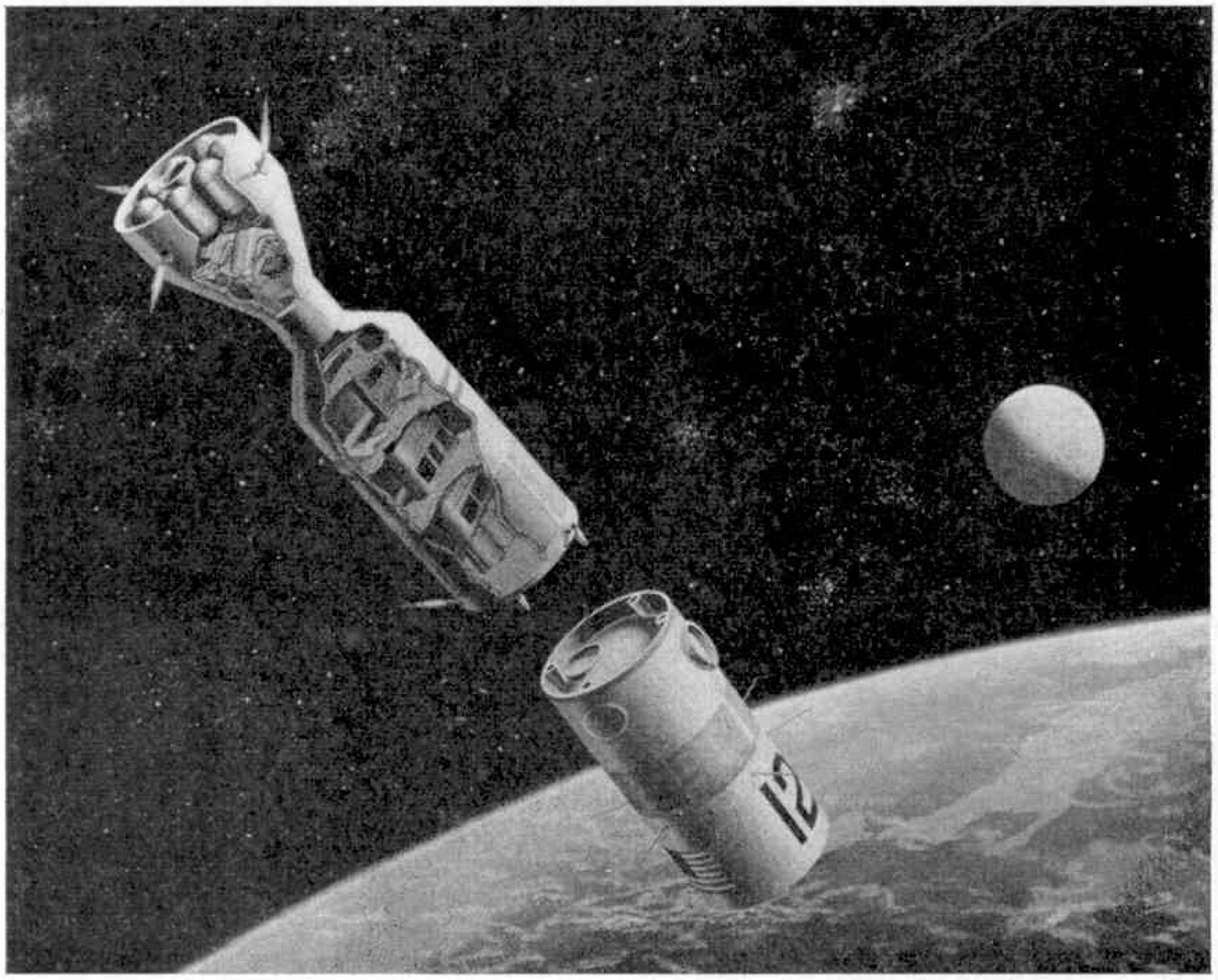
Above: New-type overhead equipment is prominent in this picture taken as the 12.15 p.m. West of England express leaves Manchester (Piccadilly) headed by locomotive E.3040. Below: The noise is disappearing from modern signal boxes. Here is a view of the new box at Cowlairs, showing staff at the control panel.



A Two-Man Satellite

SPACE NOTES

NORAIR Astro Systems have designed a two-man Earth satellite, to be used for study of the Earth's atmospheric phenomena, which would orbit at an altitude of about 500 miles. It is intended that each pair of occupants should stay in orbit for one week with a possible additional week in case of emergency. A shuttle vehicle based on a modified NASA Mercury capsule would be used to transfer the scientists between Earth and the satellite.



This permanent space laboratory would have its two-man crew replaced every week. Photograph by courtesy of Northrop International.

The complete system would be made up of three components—a section containing the scientific equipment, which is also designed to couple up to the shuttle vehicle for transfer of equipment and men; the living compartment, which would contain air and waste conditioning plant, communications equipment and off-duty living facilities, and the shuttle vehicle. The satellite, consisting of these three components, would rotate on its axis once during each revolution, thus remaining directed towards the Earth.

PREDICTING WEATHER

At the time of writing there appears to be a good chance that a European Space Club will be formed. The idea behind such an organisation is for governments to share the high cost of space experiments. Much of the work to be done is pure scientific study of upper atmosphere and space phenomena which may not immediately yield financial returns. But there are two fields of satellite applications which could, within a few years, easily become financially self-supporting. These are communications and weather satellites.

Even though weather ships and stations are now distributed throughout the world weather forecasting is still more of an art than a science. One of the biggest obstacles to the provision of accurate forecasts (local or countrywide, short or long-term) is the lack of sufficient information. A great deal of time is required to collect information from a large number of weather stations and to plot and analyse it and decide what it all means. And even then the results are based on remarkably scanty data.

It was because of this that the National Aeronautics and Space Administration initiated a programme of satellite launchings aimed at providing a quick and complete picture of the world's weather. The idea behind the first satellite, Tiros I, was to provide fairly crude pictures of cloud coverage. Tiros I was launched on April 1 last year and during its three months of useful life produced nearly 23,000 cloud cover pictures. For the first time meteorologists have been able to see cloud patterns on a global scale and have used them as a background to the routine observations. These satellite results have, indeed, already been used to help produce the daily weather forecasts.

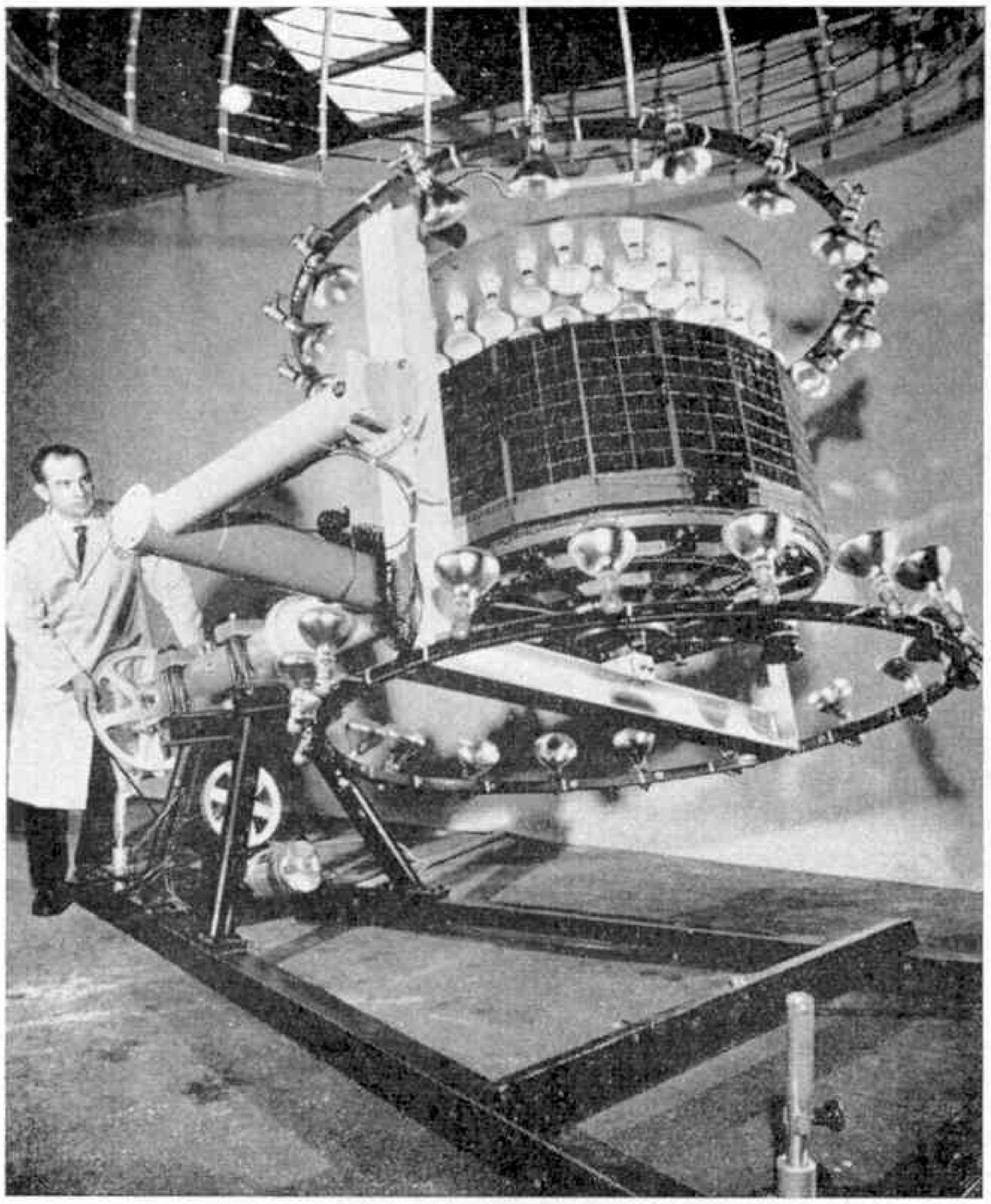
Tiros I looked like a giant pillbox, covered with 9,200 solar cells for the production of electricity from the sun's rays. It contained two miniature television cameras, video tape recorders, transmitters, rechargeable batteries and a great deal of control and communications equipment. One of the cameras had a wide-angle lens and took a strip of overlapping pictures each 135 miles long and 1,000 miles wide. The smaller camera, with a resolution of 1,500 feet, took pictures 100 miles in width. The reason for the two cameras was that the smaller area pictures would have been difficult to

By
J. Humphries, B.Sc.(Eng.),
A.M.I.Mech.E., A.F.R.Ae.S.

identify by themselves, whereas the large pictures covered a sufficient area to be identifiable. The exact position of the detailed pictures could then be determined from the wide-angle pictures. Linked to each camera was a miniature television magnetic tape recorder (video recorder) which could store 32 photographs on tape. Thus, pictures could be relayed directly to the receiving station if within range, or stored and sent by command at a suitable time. Three and a half minutes were needed to transmit all the pictures from one tape.

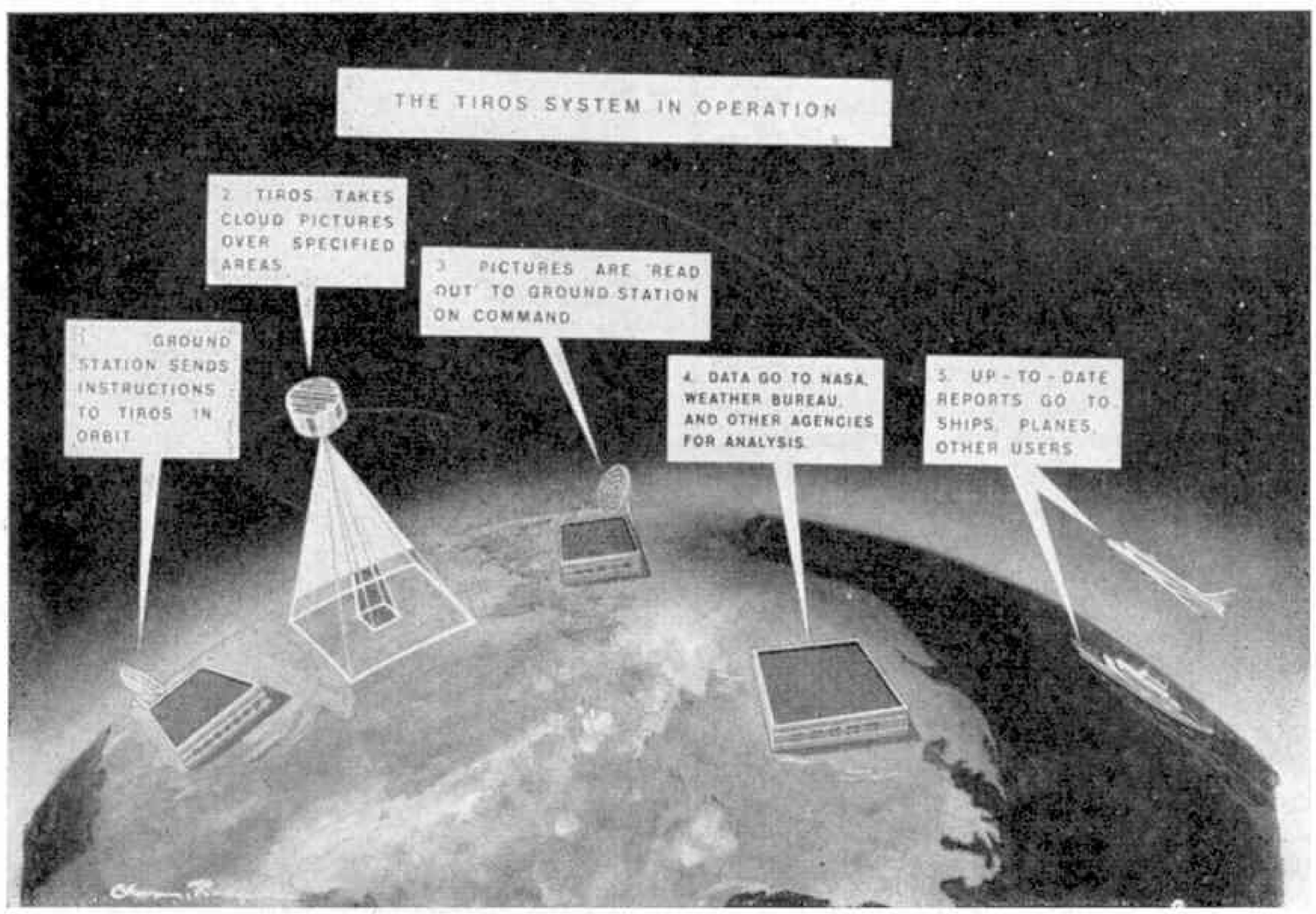
The satellite was spinning at a rate between nine and twelve revolutions per minute and could be programmed to take pictures at ten or 30-seconds intervals. Interpreting the pictures was a very difficult job. The wide-angle lens gave a "barreling" effect to the pictures, and they also became distorted during transmission. Whenever the lens was not pointing straight down at the Earth the picture was foreshortened—and, with the spinning satellite, this was nearly all the time. The whole experiment was more successful than its sponsors had dared to hope and, as a result, long-term plans for future meteorological satellites have already been approved.

The next two satellites will be of the same type but heat measurements will also be made with them. The amount of heat



(Above) Tiros II in a special test machine that checks its instruments in simulated space conditions.

(Below) Major orbital and ground elements for Tiros. The satellite receives its instructions from Point Mugu in California. This picture, and that at the top of the page, are by courtesy of The National Aeronautics and Space Administration.


THE TIROS SYSTEM IN OPERATION
1. GROUND STATION SENDS INSTRUCTIONS TO TIROS IN ORBIT
2. TIROS TAKES CLOUD PICTURES OVER SPECIFIED AREAS
3. PICTURES ARE READ OUT TO GROUND STATION ON COMMAND
4. DATA GO TO NASA, WEATHER BUREAU, AND OTHER AGENCIES FOR ANALYSIS
5. UP-TO-DATE REPORTS GO TO SHIPS, PLANES, OTHER USERS

radiated into space by the atmosphere has a very important bearing on weather, and a map of heat output might prove as useful as the cloud pictures.

One of the major drawbacks of Tiros is its spin. In the next design, Nimbus, a stabilising system will keep one side always pointing perpendicularly towards the Earth. The first Nimbus will be fired into a polar orbit, at about 600 miles altitude, towards the end of this year. Further types of equipment may be flown in later Nimbus satellites. For example, radar can see bad weather by observing reflections from falling raindrops. Similar equipment in a satellite could detect and follow storms long before they were seen on ground radar. This would be complementary to cameras, since photographs do not tell if it is raining.

Even further in the future—in perhaps 1964 or 1965—will be Aeros, a large satellite orbiting the Earth at a height of 23,000 miles along an equatorial orbit. At that altitude it would circle the Earth in 24 hours and thus remain stationary over the same point. It could thus provide long-term weather-spotting over one fixed area.

FAIRY-TALE SPACE-SHIPS

Hansel and Gretel's ginger-bread house may yet have a practical application. One expert has suggested an edible space-ship which would use foodstuffs as part of its structure. When these structures had performed their function and had become redundant they could be eaten! For example, interior bulkheads might consist of fluids and dehydrated foods which would serve as radiation protection at the beginning of the journey. Fuel tanks could be made of special plastic which, with a limited amount of chemical processing, could be made edible.

HOLIDAYS FOR YOUTH

Many exciting and unusual holidays have been arranged by the Youth Hostels Association to encourage members to try something different this year.

Perhaps the most adventurous is the underwater swimming holiday based on Salcombe Hostel, where members will dive in the Salcombe estuary, and explore places abundant in marine life. For those who prefer to be on the water rather than underneath it, there is canoeing on the Wye and the rivers of East Anglia, and sailing on Lake Bala, at Maldon, and on the River Dart.

A riding course in the New Forest will enable members to learn riding technique and horse management, while on Dartmoor and in the Black Mountains there will be pony treks combined with some riding instruction.

Youth hostellers still walk, but in addition to ordinary walking holidays there are walks "with a purpose", including tours for photographers and botanists.

Other special holidays include bird watching at Llangollen and "digging up the past" in Wales and Wiltshire.

A 24-page booklet describing these holidays is available from Youth Hostels Association, Trevelyan House, St. Albans (Herts.).

Readers in England and Wales who are not members of the Y.H.A. and wish to join in order to participate in the Association's holiday schemes should write to the above address for particulars of membership. The Y.H.A. Handbook, which contains details of membership, regulations and information on 272 Hostels throughout England and Wales, is issued free to members on joining. Non-members can obtain a copy of 1961 edition, price 9d. (11d. post free) from the above address.

The Boys' Book of World Railways by Ernest Carter (Burke Publishing Co. Ltd., price 10/6d.), is a fascinating presentation of a subject which holds most boys in its grip. There are some first-class drawings and photographs of early locomotives and famous railway projects. An intriguing section, finely illustrated, deals with electric locomotives and trains

In Search of Crusader Castles

THE first Crusade was inaugurated on November 27, 1095, by Pope Urban II at Clermont, in France. Its object was to reopen the Pilgrim route to Jerusalem, and to restore the Holy Places, which had been in the hands of the Seljuk Turks since 1071, to Christendom.

Military leaders of the Crusade were Godfrey de Bouillon, Duke of Lower Lorraine, Hugh de Vermandois, brother of the French King, and Raymond of St. Gilles, Count of Toulouse.

By BRUCE MOORSOM

It was agreed that these leaders, with their respective armies, should find their own way to Constantinople, a fitting point of assembly from which to cross into Asia Minor, and begin the task of clearing the Pilgrim route.

The expedition I was leading decided to follow the route taken by Godfrey de Bouillon to Jerusalem in 1095. So it was that, on June 28 last year, nine people, two Cambridge undergraduates, two cine-cameramen, two mechanics, and three scientists landed at Calais with two Commer vans, one motor-cycle, and as much equipment and tinned food as each van could carry. We had cine-cameras and 16,000 feet of film, "still" cameras and 300 films, tape recorders and 200 tapes, theodolites, scientific equipment and camping gear. We were, in fact, a completely self-contained unit.

We crossed from France into Belgium on June 28 and from Belgium into Germany the next day. July 3 found us at Regensburg, in Southern Germany. It was here 865 years earlier that de Bouillon and his Crusading army had assembled but they had "one-horsepower" common horses, while we had 14-horsepower Commer vans. We left Regensburg shortly after noon on July 3 and headed for Vienna. From Austria we made for Hungary, arriving in Budapest on July 6.

Here we had our first experience of being unable to get out of the vans because of crowds that surrounded our vehicles. We were closely questioned about life in England, we exchanged cigarettes, we were offered accommodation and meals; indeed, the hospitality displayed was almost unbelievable.

Readers will recall that, in the September issue of the Meccano Magazine *last year, I described how a band of modern explorers had set out from Cambridge on an expedition to trace the route of the first Crusaders, writes the Editor. They made the journey by road and before they left Britain, in late June, the leader of the expedition, Mr. Bruce Moorsom, told me he hoped subsequently to describe their journey and their discoveries. One of their principal objects was to carry out research on Crusader castles in South-East Turkey, and to plan some of these in as detailed a manner as possible in the time available.*

Here, in the first instalment of an article describing this unusual journey, Mr. Moorsom tells how the expedition travelled from Britain to Jerusalem.

We crossed into Yugoslavia on a rainy eighth of July and soon reached the capital city of Belgrade. There we stayed only two days and soon we were on our way again towards Bulgaria. The roads were appalling, and for a whole day we averaged only nine miles an hour. Miles and miles of potholed, waterlogged, mud-surfaced roads had to be covered before we reached the Bulgarian frontier and good roads. We stayed in Sofia, the capital, for one day and next day left for the Turkish frontier.

On July 14 we entered Edirne (Adrianople), after covering 2,800 miles, We had reached the gateway to the East and saw for the first time the Eastern dress, the mosques, and other unusual sights. The road to Istanbul was good but dull. Mile upon mile of emptiness slipped by. We saw water buffalo, vultures hovering and weaving above a dead horse, donkeys laden like ten-ton trucks, camels wandering stupidly across the fields.

A Fabulous City

We reached Istanbul that evening—the beginning of a fascinating week in a fabulous city. While we were there the change of government had taken place. Menderes had been ousted and Or-General Kursel was in power. There were soldiers and army trucks everywhere and one morning our film unit was stopped by the police for filming on the water front. Two hours of interrogation cleared the matter, and the unit was asked to film the modern quarter of the city which was more

Below: One of the expedition vans at Regensburg in Germany, from which point Godfrey de Bouillon's army set out on the first Crusade. The picture at the top of the page shows the expedition's two vans at Istanbul.

The expedition makes an early start just before passing through the Silician Gates in South-East Turkey.

"progressive" and showed a true picture of Turkey. So that's what they had to do.

Our vehicles having been checked over ready for many more miles of dust and sand, the expedition set off on its way again and on July 19 crossed the Bosphorus Straits into Asia. Leaving the main Istanbul–Ankara road at Ismit, for two days we bumped across fields and mule tracks, following the Crusaders' route as closely as possible. Progress was slow, for we frequently got hopelessly lost, and our command of the Turkish language was very limited. However, July 22 saw us at Konya, 500 miles from Istanbul in Southern Turkey. Here we had to say goodbye to John Tackaberry, the expedition's treasurer. We had to get him to Ankara where he had his appendix removed. He later flew back to England to recuperate. And so, from that point, we were eight in number.

Lightening the Load

From Konya, we made for the United States' Air Force Base at Adana where we left much of our surplus provisions to collect on our way back. It seemed pointless to carry large crates of baked beans around just to give them a ride, so thankfully we were able to leave them with the Americans. They offered us iced beer and cold showers and soon we were on our way again. So, with our load considerably lightened we crossed the Taurus mountains through the Silician Gates and arrived at the Syrian frontier on July 27.

That day we covered the 220 miles of dusty, uninteresting miles to Damascus. It was a depressing journey—white sand for mile upon mile, complete nothingness for hour after hour, just the heat and the appalling glare of the sand to keep one awake.

Damascus we found bustling with activity and modern ideas. It had air-conditioned cinemas, television, swimming pools, superb restaurants, and, of course, a history which is intriguing. We stayed for three days, and were sorry to leave.

On Monday, August 1, we left Damascus and motored due south to cover the last leg of our journey to Jerusalem. Three hours later we reached the frontier and crossed from Syria into Jordan. Stopping at the Dead Sea, we attempted to swim in this huge salt bath which is 1,286 feet below sea-level. The operation proved to be completely unsuccessful. One's legs just rose to the surface, and it was possible to sit in the water and read a book. When we dried ourselves on getting out we found that the salt had formed a thick coat on our bodies, and it was necessary to have a shower to remove this. It was, however, a pleasant and amusing experience.

Golden roof in sight

With the temperature at 112 degrees we left the Dead Sea and climbed steadily to Jerusalem. We were still two hours' journey away, but by five that afternoon the golden roof of the dome of the Rock Mosque was sighted, glittering in the sun. Shortly afterwards we entered the city and parked outside the Damascus Gate. The first part of the journey was over.

It had taken the original crusading army over four years to reach Jerusalem; we had taken four weeks, and had stopped many times. We had crossed ten countries, covered 4,470 miles and, apart from two punctures, had experienced no trouble with our vans.

BOOK REVIEWS

An excellent first title in "The Mechanical Age Library" is *Telescopes and Observatories* written by K. V. Bailey. From the days of the first observers of the heavens this well-illustrated book progresses through the centuries to the present age with its wide diversity of meticulous instruments, including the 250-foot Jodrell Bank radio telescope, to aid the astronomers' art. The book, price 9/6d., is published by Frederick Muller, Ltd.

* * * *

Simple experiments for young folk with inquiring minds are contained in *Fun With Chemistry*, written by Mae and Ira Freeman, and edited by L. H. Angus, M.SC., F.R.I.C.

The book is one of exceptional clarity of production; each experiment occupies one page of text, with a pictorial facing page. By carrying out the tests described the reader can learn the answer to many interesting problems in chemistry. All the experiments can be conducted at home, as well as in the school laboratory, using a variety of household items and some test tubes. Published by Edmund Ward, *Fun With Chemistry* costs 11/6d.

First in a new series

Judge For Yourself

By A Barrister

There was great excitement in the town when the world-famous foreign football team arrived. Crowds besieged the ground, and many had to be turned away. Then someone noticed there would be a very good view from a house which backed on to the field, and within seconds a wave of enthusiastic football fans swept through the gate and into the garden.

The householder, Mr. Worthy, was manhandled when he tried to stop the mob, and his family was terrified. A great deal of damage was done to the garden. But Mr. Worthy could not identify exactly who had ill-treated him or damaged his property. Could he still claim compensation, and, if so, from whom?

(For answer, see page 110).

The forty-third airline to operate the Vickers Viscount turboprop airliner is SAS. The aircraft seen above is arranged as a 48-seater.

SAS FLY VISCOUNTS

THE picture at the top of this page, showing a Viscount in SAS livery, will surprise many keen spotters, for SAS have never announced that they would buy this type of airliner. Nor, in fact, have they done so, for the Viscount is one of two which SAS have hired from Fred Olsen Airtransport for operation on Norwegian internal routes radiating from Oslo, where noise restrictions prevent the use of jets.

Fred Olsen's four Viscount 779s have had an interesting history. They flew for a long time in the colours of Austrian Airlines until that company took delivery of its six Viscount 837s. Two were then hired by B.E.A. to supplement its own huge fleet. Now the others have been repainted with the Viking longboat insignia of SAS, as a reminder that there are still plenty of jobs that turboprop aircraft can do best, even in a jet age.

AIR NEWS

By

John W. R. Taylor

HELICOPTER POSTMEN

During training flights from the R.A.F. Station at Valley, Anglesey, Whirlwind helicopters of No. 22 Squadron often visit the Skerries Lighthouse, landing on a 30 feet square ledge of rock. The trip takes only 25 minutes and enables the keepers to get their mail and newspapers far more quickly and regularly than if they had to rely on a boat service.

When the sea is rough, the helicopter pilots are also able to carry any food or medical supplies that may be needed. Their routine has become so well known locally that the Flight Commander sometimes receives letters addressed simply to "Skerries Lighthouse, c/o No. 22 Squadron, Valley."

NOT ALL-METAL

Although we often think of modern high-speed aircraft as being made entirely of metal, this is far from true. A Boeing 707 jet-liner contains some 400 board-feet of spruce, which would have been sufficient to build a fair size wood and fabric aeroplane of the 1920's.

The wood is now used mainly for the cabin ceiling, partitions, doors and other trimmings, in the form of frames which are filled with paper or glass-fibre honeycomb and covered with plastic.

TURNING ON THE HEAT

Now that the North American X-15 research aircraft has been fitted with a 58,000 lb. thrust XLR99 rocket-engine, making possible speeds of up to 4,000 m.p.h., its original pointed nose has been replaced by a remarkable new rounded nose-cone which will help to protect it from the kind of heat which burns up shooting stars and sputniks.

Known as a "hot nose", the nose-cone measures the aircraft's angles of attack and side-slip as it leaves and re-enters the effective atmosphere at high altitudes. Unless these angles are correct, the X-15 could easily be burned up by air friction.

To prove that the "hot nose" will itself withstand intense heat, it was subjected to the blast from the turbojet engine of a fighter aircraft, with afterburner in use. This gave a temperature rise from 500° to 3,700° in about five seconds, without harming the nose-cone.

Similar in shape to a ballistic missile re-entry nose-cone, the "hot nose" is seen here installed on an X-15.

A Boeing-Vertol 107 is shown hovering at the new Downtown Heliport in New York City with the skyscrapers of Wall Street rising behind it. Photograph by courtesy of Boeing Airplane Company, U.S.A.

AIRLINER TV SOON

Most *M.M.* readers who watched America's big "Echo" balloon satellite moving across the sky last year, after dark, must have wondered if such devices would ever be of any practical use. One answer has just come from Trans World Airlines, who hope to use satellites of this kind as relay stations to provide TV shows for passengers in flight.

Already, full-length films are being screened in the cabin during some of TWA's transatlantic jet flights. Soon it is hoped to carry TV sets which would pick up programmes broadcast from America or Britain and "bounced back" from the orbiting satellites.

AUSTRALIA'S FIRST HELIPORT

Australia's first commercial heliport was opened in Melbourne last December by Sir Dallas Brooks, the Governor of Victoria. Operated jointly by Ansett-A.N.A. and Trans-Australia Airlines, it floats on two pontoons moored to the north bank of the River Yarra.

Main purpose of the heliport is to permit airline passengers to be flown to and from Melbourne Airport. The journey by helicopter takes only seven minutes, compared with anything up to 40 minutes by road.

. . . AND NEW YORK'S SECOND

So popular are New York Airways' helicopter services that a second heliport was opened on Manhattan Island on December 8, 1960. Built by the Port of New York Authority, it is situated near the foot of Wall Street, in that important business area of the city, and is only seven minutes by air from La Guardia Airport or 20 minutes from New York International Airport.

The new heliport cost about £82,000 and, like the earlier one at West 30th Street, is built as a pier over the river. It has an 85 feet by 80 feet landing area on the outer edge of the pier, and a 300 feet by 85 feet parking area to accommodate two large and two small helicopters.

This spring, New York Airways are operating 31 flights each day through the new heliport. Their present 15-passenger Vertol 44B single-engine helicopters are scheduled to be replaced soon with a new fleet of five 25-passenger Boeing-Vertol 107's, and the prototype 107 was demonstrated at the opening ceremony.

Powered by two 1,050 h.p. General Electric CT58 gas-turbines, it is probably the finest medium-size airline helicopter in the world. Safety features include the ability to fly on one engine and to land in, and take off from, water without the need for any special floatation equipment.

IT MAKES YOU THINK!

Aer Lingus—Irish International Airlines—publish a little monthly magazine named *Aersceala*, which usually contains a number of interesting or amusing facts and stories. The latest issue compares the airline's first aircraft, a six-passenger D.H. Dragon (EI-ABI), with the Boeing 720 jet-liners which have just been delivered. It states:

"Now we have an aircraft that has six hostesses on board and so many passengers that they have to be divided up into bundles of twelve; that carries more fuel for one flight than we used in a whole year in those early days; which uses an engine starter that costs more than did our first aeroplane, its equipment and the wages of the whole staff.

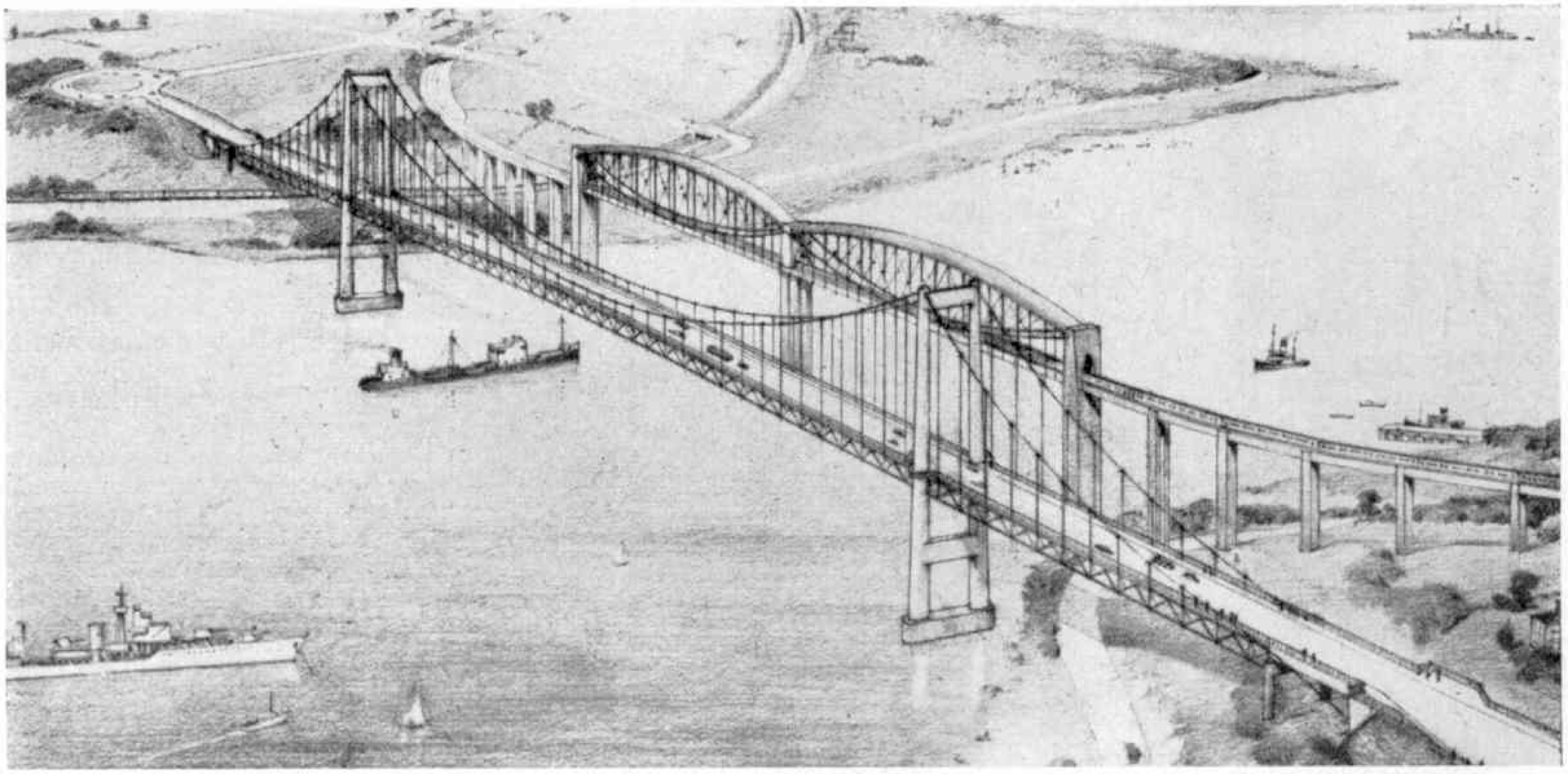
"The Boeing's fuel capacity is 11,321 gallons, that of EI-ABI 50 gallons, 25 each side. Yet, it took nearly as long to put in the 50 gallons in the early days as it now does to put the 11,321 gallons in the Boeings."

GERMAN RESEARCH AIRCRAFT

One of the most interesting aeroplanes flying in Germany at present is the Dornier Do 29. It uses the basic airframe of a Do 27 monoplane, but has two 270 h.p. Lycoming GO–480 engines mounted under the wings and a new glazed nose in place of the normal single engine. Other changes include the fitting of a more "stalky" undercarriage; but the most unusual feature is that the rear of each engine nacelle, carrying the pusher propeller and its drive-shaft, can be tilted down, as shown in the illustration below.

When the propellers are tilted in this way they give considerable upward, as well as forward, thrust. As a result, the Do 29's take-off run is shortened and the aircraft can be operated from very small airfields.

Intended for research—the Dornier Do 29 seen in flight with the pusher propellers and drive-shafts at the rear of the nacelles, tilted downwards.



NEW BRIDGE OVER THE TAMAR

At a cost of £1,500,000 a new bridge is now being built across the River Tamar, linking two counties in the South-West of England. It will carry the main road from Plymouth, in Devon, to Saltash, in Cornwall. Due to be completed this summer, it runs cheek by jowl with the famous Royal Albert Railway Bridge. Here is the story of its construction.

WHEN the decision has been taken to construct a new bridge across a river of the size of the Tamar there is, of course, much preliminary investigation to be carried out. As far back as 1954 a report was made on the traffic aspect of the problem of crossing the River Tamar, indicating the urgent need for improvement.

In 1955 Messrs. Mott, Hay and Anderson, consulting engineers, were appointed to prepare a report and this dealt with a number of possibilities including two tunnel schemes and two bridge schemes. The project recommended was the bridge now under construction just north of the Royal Albert Bridge.

Aerodynamic Tests at Teddington

Before the design of the bridge was completed bore holes were sunk in the river, and on the mainland at each side, to ensure that there would be satisfactory foundations. An aerodynamic investigation was also carried out by the National Physical Laboratory at Teddington to ensure that the proposed design of the bridge would be aerodynamically stable. Another vital preliminary was the obtaining of Parliamentary powers to construct the proposed new bridge, and a Bill was presented to Parliament in the 1956–7 session, the Act being passed the following summer. Towards the end of 1958 the consulting engineers were instructed to proceed with the design of the bridge and to invite tenders for carrying out the construction work.

It was considered that a suspension bridge was the most suitable type for this crossing and the approved design was for a bridge with a central span of 1,100 feet and side spans of 374 feet. Other principal features of the bridge include the main towers, which are of reinforced concrete and will have a height of about 250 feet. These towers are founded on twin circular piers which are mounted on rock below the bed of the river.

By
J. Kenneth Anderson, M.A., M.I.C.E.

The side spans terminate on side towers which are founded on rock on the mainland at either side. The stiffening truss of the bridge, which, except for the breaks at the main towers, extends from the side pier on the one side of the river to that on the other, is supported by steel wire suspender ropes which, in turn, are supported by the main cables. Further, these main cables, suspended from the two main towers and side towers, are anchored in tunnels on each side of the river.

The main cables consist of 31 locked coil wire ropes, each of 2.37 inch diameter, every wire of which is separately galvanised. The cables formed by these 31 strands will be wrapped by protective wire so as to prevent seepage of water and corrosion.

The main stiffening girders already referred to are supported at 30-foot intervals by the vertical suspender ropes which are of similar design to the strands used in the main cable. The stiffening trusses will support a reinforced concrete deck which will have a 33-foot roadway and two 6-foot footpaths, the deck being seven inches thick with a surface on the carriageway of one and a half inch thick mastic asphalt.

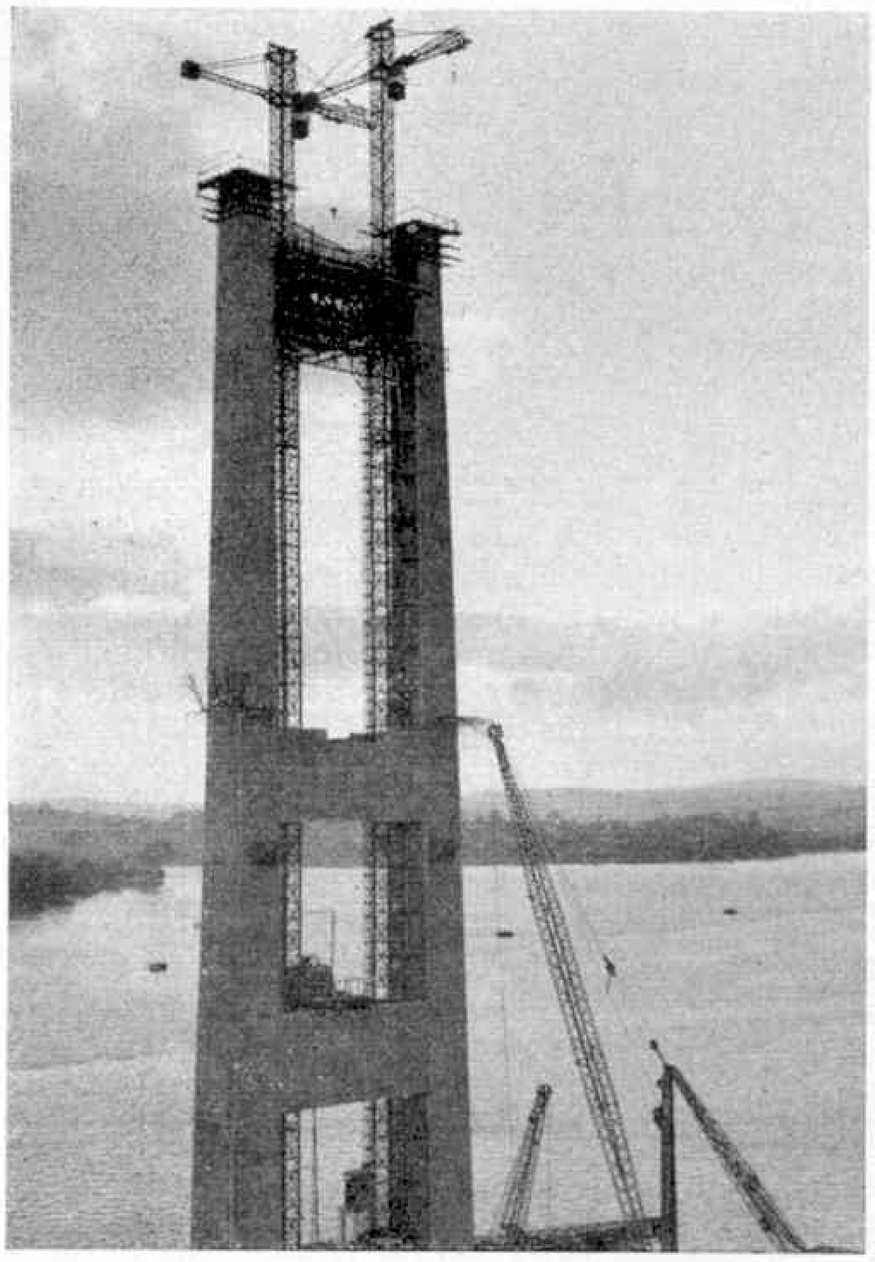
First Move: Erecting the Main Piers

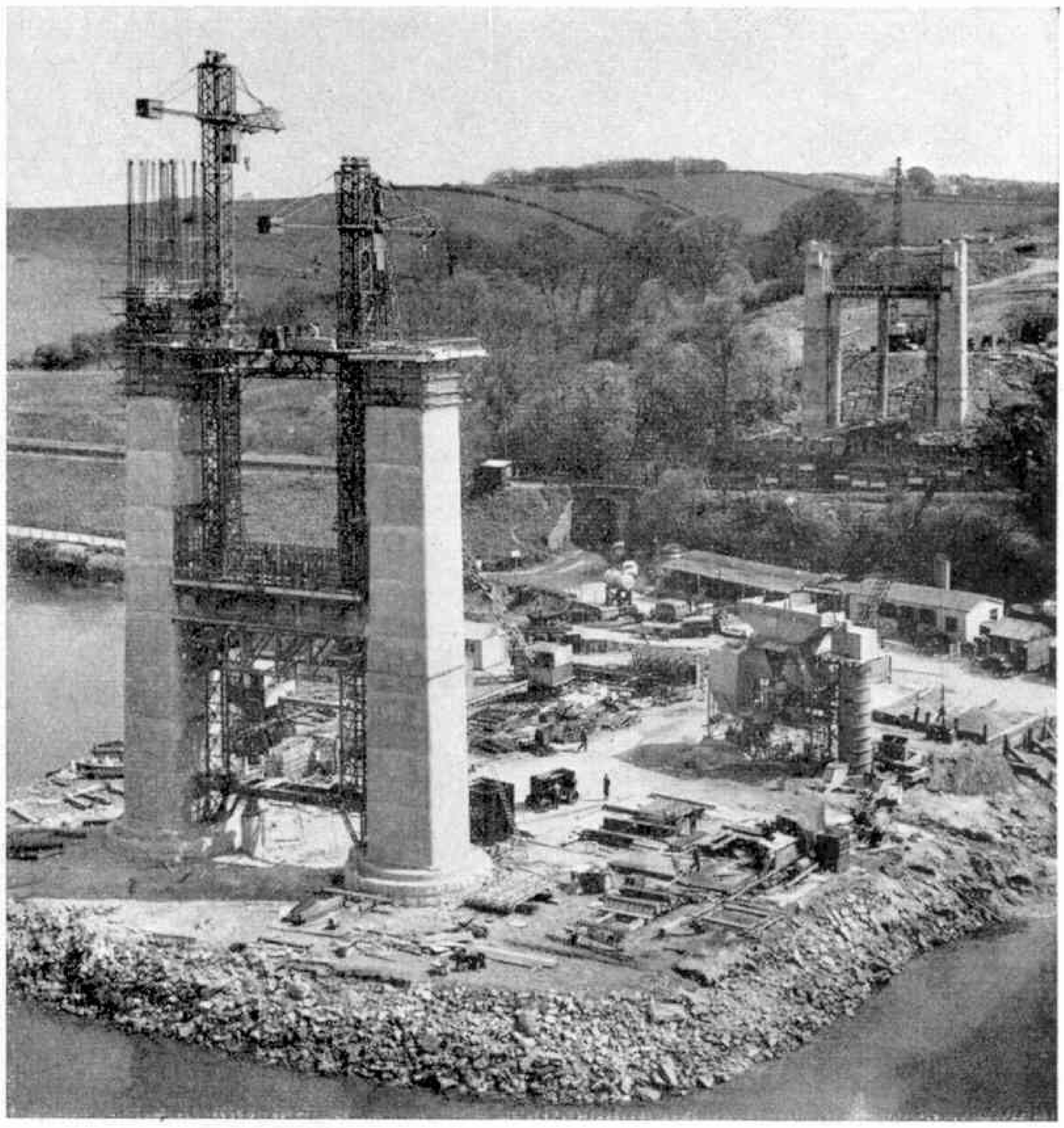
The bridge will require approximately 1,000 tons of steel wire for the ropes forming the main cables and suspenders, and approximately 3,000 tons of fabricated steel work in the suspended structure.

Tenders for the work were received in June 1959 and a contract was let to the Cleveland Bridge and Engineering Co. Ltd., who commenced work at the site in July 1959.

First move when construction began was to put in hand the erection of the main piers, side piers and anchorage tunnels. For the construction of the main piers artificial embankments, or bunds, were led out into the river from each side. Two caissons on each side of the river were then constructed on each of these bunds at the main pier sites. These were then

The new Tamar Bridge (above) as it will appear when completed.





The above picture of the new suspension bridge was taken by "M.M." reader P. W. B. Semmens of Middlesbrough while crossing the Royal Albert Bridge. (Right): A view of the supporting towers under construction as seen from the Plymouth side. Picture by Nicholas Horne, Totnes, Devon.

sunk through the bunds and the river bed down to solid rock. In constructing the circular piers the granite facing was added as the caissons were sunk into the ground. When satisfactory foundations were reached the caissons were concreted. Next stage was the construction of the reinforced concrete towers which are founded on the twin piers at each side of the river.

In the meantime, a start had been made to tunnelling for the anchorages at each side of the river. These tunnels extend at least 50 feet into the rock.

Once the main towers, side towers and anchorages had been completed cables attached to the anchorages were suspended across the river to support temporary cat-walks. The cat-walks themselves provided means of drawing over the 31 individual strands of wire rope that form each of the two main cables, and also provided access for the erectors carrying out this part of the work.

Building the Stiffening Truss

Next move will be the erection of the stiffening truss, with the wind bracing and deck stringers. The reinforced concrete deck will then be constructed. When the whole of this section of the work is completed the main cables will be wrapped with protecting wire, as previously indicated. The contract time for the bridge is two years and if this time is adhered to the new structure should be open to traffic during the present summer.

BOOK REVIEW

THE SHIP: HOW SHE WORKS

Published by Adlard Coles Ltd., Southampton, this is a most intriguing survey of the "mysteries" of a modern ocean liner, the reader being introduced to the ship's bridge, wireless room, boat deck, fo'c'sle head, engine room, stokehold, refrigerated hold, etc., and to the equipment, machinery and gear, to be found in these places. The author is Stuart Beck, a well-known maritime artist noted for his ability to reduce the most complicated mechanisms to readily-understood drawings. His book explains the latest navigational, scientific and mechanical equipment, and by means of no fewer than 60 drawings and 16 photographs the text can be understandably followed by anyone who has never been aboard a liner.

There are 32 sections, each dealing with the numerous features of a ship, and the book fully justifies its title. This is the latest publication in the well-known "Ship Series" of Adlard Coles, although it is much larger than earlier books. Priced 9s. 6d., it fully maintains the high standards set by its predecessors. From cover to cover I found this book most instructive and fascinating.—**E.W.A.**

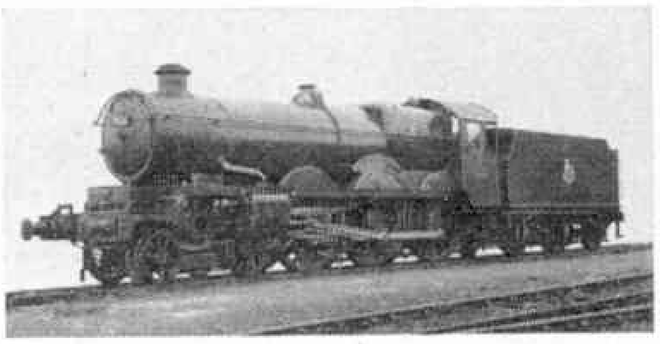
BREAKDOWNS AVERAGED ONE A MINUTE

During 1960 the Automobile Association answered more than 500,000 breakdown calls from its 2,500,000 members—an average of one every minute of the day and night. Punctures and flat batteries headed the list of troubles.

The total of 501,900 members given assistance under the A.A. Free Breakdown Service is an increase of seven per cent over the 1959 figure. In addition, tens of thousands of emergency repairs were carried out at the roadside by Patrols.

An A.A. spokesman said that 373,000 of the requests for assistance were directed in the first instance to A.A. offices operating a 24-hour emergency service. Help was then provided either by A.A. Radio Patrols or by one of the 7,000 garages co-operating in the Free Breakdown Scheme. The remaining 128,200 applied direct to garages for assistance.

An analysis of the principal causes of breakdowns shows that mechanical trouble accounted for 51·6 per cent of the cases, engine troubles 11·9 per cent, fuel system troubles 11·5 per cent, out of petrol or oil 4·4 per cent, transmission 4 per cent, jammed starter 2·25 per cent, clutch 1·75 per cent, and steering, brakes and springs each ·5 per cent. Electrical faults totalled 33·65 per cent and of these flat batteries were responsible for 20·5 per cent.



Railway Notes

Contributed by R. A. H. Weight

MAKING UP TIME ON THE G.N. LINE

The Great Northern Line, an important section of the Eastern Region and formerly of the L.N.E.R., includes the trunk main system from London, King's Cross, through Peterborough and Grantham to Shaftholme Junction, Yorkshire. This constitutes the southernmost 160 miles of the East Coast Route to and from Edinburgh, Aberdeen, etc.

At Doncaster, a few miles south of Shaftholme, diverging tracks carry express and other trains into the North Eastern Region; to and from Leeds–Bradford–Harrogate and other busy parts of the West Riding towards the north-west; eastward to Goole and Hull, with connections to North Lincolnshire. Intermediately, principal branch or secondary lines provide through or connecting services to and from Cambridge; Boston–Lincoln–Grimsby; Nottingham; Sheffield and elsewhere. North of Shaftholme Junction the East Coast main route passes through York, Darlington, Durham, Newcastle, Berwick, thence into the Scottish Region from the North Eastern.

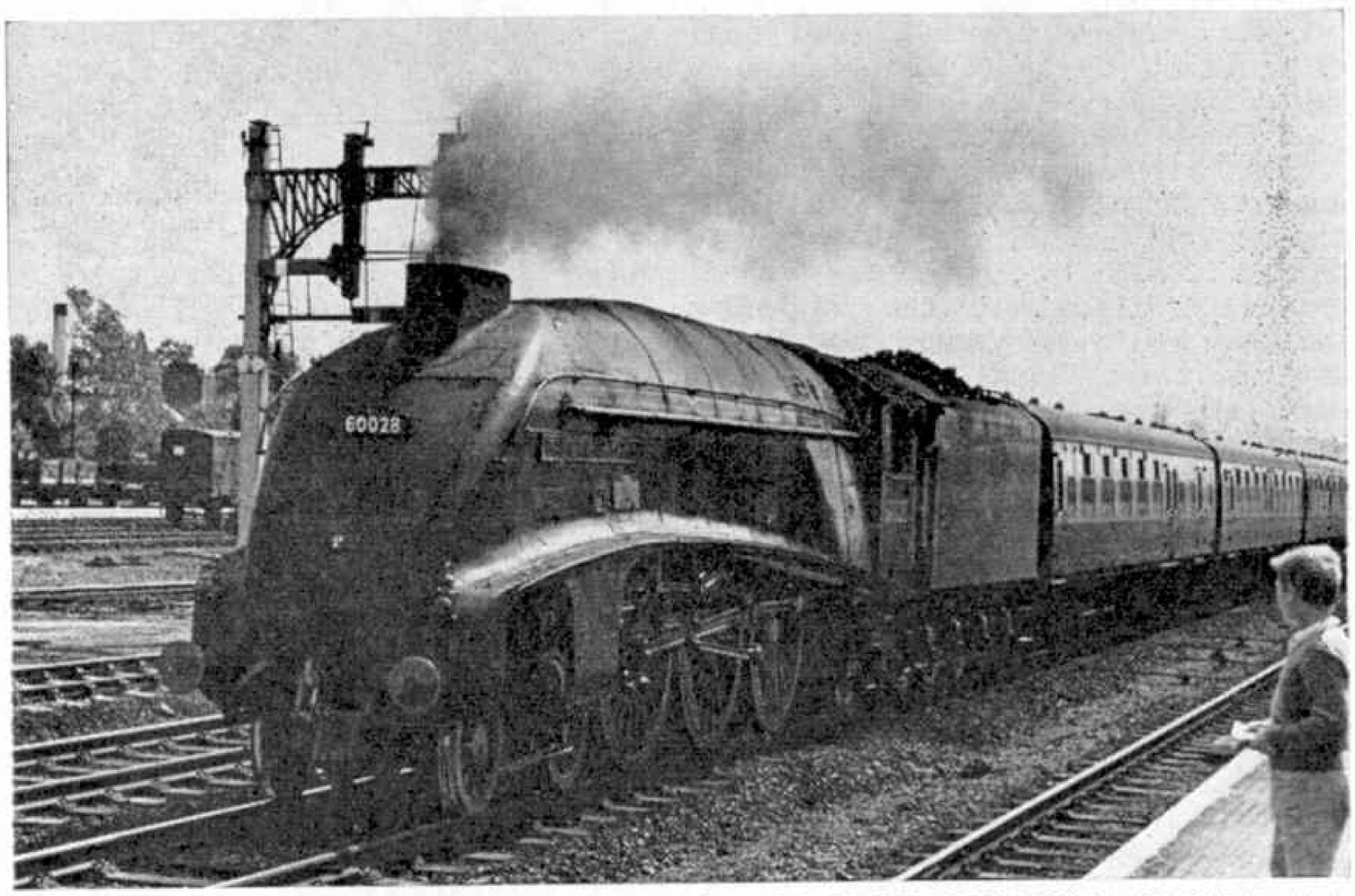
Each-Way Runs

A good many of the long-distance trains are now hauled by type 4 D200 class diesel-electric locomotives, some of which usually work right through between Edinburgh and King's Cross, on the southbound *Flying Scotsman;* northbound morning *Talisman* and 10.15 p.m. from King's Cross. Others make the 268-mile Newcastle–London run in each direction with one crew, several of the day and night expresses being scheduled non-stop both ways between King's Cross and Darlington or Newcastle, as I have mentioned from time to time when reporting fast journeys in the *Tees-Tyne Pullman* and other principal services. Steam Pacific locomotives also take a considerable share, especially from King's Cross Depot, from where A3 and A4 engines built around 25–35 years ago continue to give fine service, achieving high mileages and quick turn-rounds between long trips. Some examples of their good work are given in these notes.

On a busy day with the *Tees-Thames Express*, 2.0 p.m. from King's Cross, now running daily, serving principal stations to York, Middlesbrough and Saltburn, A4 No. 60015, *Quicksilver*, had a 13-coach train weighing some 455 tons gross. After a 2-minutes late start there was a slowing for repair work at Potters Bar, top of the first long rise, and severe signal delays, especially approaching Peterborough, culminating in a short stop. Nevertheless, speed had been up to 88–91 m.p.h. north of Hitchin and the platform arrival at Peterborough was punctual. Over the 29 miles to Grantham, including Stoke bank, where there was a trackwork slowing for which time was allowed, two minutes were gained. No. D284 took over at Grantham, from which point *Quicksilver* would be returning south with another express.

On the similarly-loaded 3.50 p.m. down, summer working, also with King's Cross driver and fireman, who were in this case going through to Newcastle, another A4, No. 60018, *Sparrow Hawk* did equally well after initial delays. All was clear for 70 miles from New Southgate, in the London suburbs, to Peterborough—76½ miles passed in 78 minutes after an 86 m.p.h. maximum. A similar slack had to be made on the way up to Stoke Signal Box, 100 miles from London, but the first stop at Grantham was well within time. The 105½ miles had been covered in 112 minutes despite nearly 10 minutes of delays.

In the opposite direction A2 4–6–2s, which have driving wheels 6 feet 2 inches in diameter compared with the 6 feet 8 inches of the A1–3–4 classes, Nos. 60526 *Sugar Palm*, and 60515 *Sun Stream* respectively, stationed at York, on the 11 a.m. Edinburgh–King's Cross train conveying through carriages from Aberdeen and Glasgow, had "11-on" or nearly 400 tons behind the tender. Both engines made sure of an early or punctual finish at King's Cross in spite of leaving the last stop at Peterborough late on account of various traffic and engineering delays. When I was aboard, in the latter instance, a 60 m.p.h. average was maintained from Peterborough to King's Cross, reached two minutes early after a six-minutes late



The "Tees-Thames Express", travelling uphill at over 60 m.p.h. behind No. 60028 "Walter K. Whigham", is duly noted by the boy on the platform at Welwyn Garden City. Photograph by the late C. A. Gostling.

start, with an almost clear road throughout and speeds out in the open ranging between 61 and 82 m.p.h. *Sugar Palm* regained its seven-minutes late start to arrive punctually after two moderate slowings and a maximum of 78.

A grand effort was also made by friendly Driver Davis and Fireman Graves who had worked the A1 No. 60154, *Bon Accord*, from Newcastle (and who figured in the three previous runs mentioned) with a heavy 13-coach midday express calling at Durham, Darlington, York and Grantham, where I joined the train. There had been delay at York while a new heater pipe was fitted to one of the coaches to ensure passengers' comfort and, later, a signal stop. *Bon Accord*, not in the best of fettle just then, had to be driven harder than is usual with a Pacific to attain maxima of 87–75–72 m.p.h. downhill, and to maintain a minimum of 60 up the rise past Hitchin to Stevenage, and again when recovering from a permanent-way slowing. Most of the lost time had been recovered by Welwyn, but more delay ensued along the last 20 miles.

Everything was more favourable, weather included, on a summer Saturday, when A3 No. 60071, *Tranquil*, one of the original Gresley type now modified, gave me a wonderful trip with no delays up from Peterborough in a Leeds train calling at Huntingdon with "12-on". The 59 miles into King's Cross from the restart at Huntingdon took barely 57 minutes, and 74 m.p.h. was averaged along 44 undulating miles before easing into the London area. Further north, this express had been held for the *Norseman* to pass and precede, then had to make connections at several stops, having at the maximum been 15 minutes late. But with the aid of smart station work at Peterborough and Huntingdon final arrival was exactly to time at 6.32 p.m.

All the principal King's Cross–Leeds services each way, including the *Queen of Scots* and *Yorkshire Pullman*, are normally hauled by Pacifics, the Peppercorn A1 class predominating. Although the famous descent from Stoke towards Peterborough, southbound, is not steeper than 1 in 178, it is long enough and sufficiently well aligned to allow of safe, high speeds under favourable circumstances. Pacifics of classes A1–4 have all reliably been timed to reach 100 m.p.h. or close to it, on various occasions during recent years, with the streamlined A4 regarded as the fastest. The very powerful *Deltic* 3,300 h.p. English Electric diesel-electric locomotive has been timed similarly, although the authorities ordain a usual maximum of about 90. Several of these runs were logged by Mr. Norman Harvey on last summer's schedules.

S.R. No. 34086 "219 Squadron" hauling "The Golden Arrow" on a day when diversions via Otford and Maidstone were in force. Photograph by Derek Cross.

The "Trans-Pennine"

Decidedly the quickest-ever timings, with more services at regular intervals, through the Pennines between Liverpool–Manchester–Huddersfield–Leeds began operating in January. The *Trans-Pennine* inter-city diesel sets are new, consisting of six comfortable cars, four of which are powered to give rapid climbing and acceleration. Refreshment service includes the "Griddle Car" providing a variety of dishes including griddle-cooked Angus beef served in toasted bread roll. There are five through journeys each way between Liverpool and Hull, via Selby, providing a coast-to-coast time of less than three hours, with considerable speeding up intermediately to and from Leeds, Manchester, etc.

Ordinary restaurant car trains now hauled by 2,000 h.p. type 4 diesel-electric locomotives on the Newcastle–Leeds–Manchester–Liverpool service have also been considerably quickened, the fastest making the overall run in just over four hours.

"The Golden Arrow"

Since my notable journeys reported in these notes some years ago, the outward British port for *The Golden Arrow* service has been changed from Folkestone to Dover, and the starting time altered to 10.0 a.m. from Victoria, or 11.0 while summer time is in force here. The evening inward service is similarly by way of Dover and subject to the same variation in timing. For some time now the locomotive has been of the S.R. West Country or Battle of Britain light Pacific class, as no Merchant Navy or Britannia 4–6–2s are stationed at Stewarts Lane, London, Depot. Sometimes one or two ordinary corridor carriages are attached, as well as Pullman cars and baggage trucks.

Changes across the Atlantic

It is with mixed feelings, certainly tinged with regret for many, that we have heard during the past year or two of the "last steam locomotive" on several of the great railroads of the U.S.A. and Canada. This applies to principal regular train or long-distance haulage, if not for local freight or shunting as well. For example, the Canadian National Railways reported a crowded reception at Winnipeg for the final arrival of Mountain-type 1929-built No. 6043 on train No. 76, after which "the era of the steam locomotive on the vast C.N.R. system was at an end... which now has 2,144 diesel locomotives in service". Very powerful diesels cross the great Continent, sometimes operating in pairs or trios over mountainous and steeply-graded sections, or when heading huge loads of freight train box-cars.

Railway enthusiasts are active in those lands; various railtours and special runs are organised employing old rolling stock and retired steam locomotives. With official co-operation, various preservations or complete museums for railway and transport equipment have been planned or brought into effect. Grand Trunk Western 4–8–4 No. 6325 has, for instance, been placed on permanent exhibition in Battle Creek, Mich., and Canadian National No. 1165 will go to the planned Railroad Historical Association Museum in Montreal. An American Museum in Colorado includes a Pullman-type observation coach built in 1887, with clerestory roof, narrow windows and end balcony, similar to some introduced about the same time on the former Midland Railway in this country. Some of these were still in use on odd duties here when I was a boy.

Budd stainless steel main line coaches and railroad cars in the current elaborate and large styles of construction and equipment, although weighing less than hitherto, are much in evidence in the United States where competition by air and road transport is strongly felt. Long stretches of line are controlled and signalled from one central traffic office perhaps many miles away.

DINKY TOYS NEWS

By "THE TOYMAN"

Bentley Coupe Has Dashboard Detail

WE are coming to the time of the year when, at last, the days begin to lengthen and very soon we shall be making plans for trips out of doors. I imagine that many Dinky Toys enthusiasts are cyclists and indeed, motor-cyclists, while some of the adult collectors, I know, are keen car drivers. Our Road Safety Notes this month bear on the subject of preparations for Spring. You will find them on page 90 and I do hope all my readers will take careful heed of the wise words of the experienced Road Safety official who will be writing in these pages each alternate month.

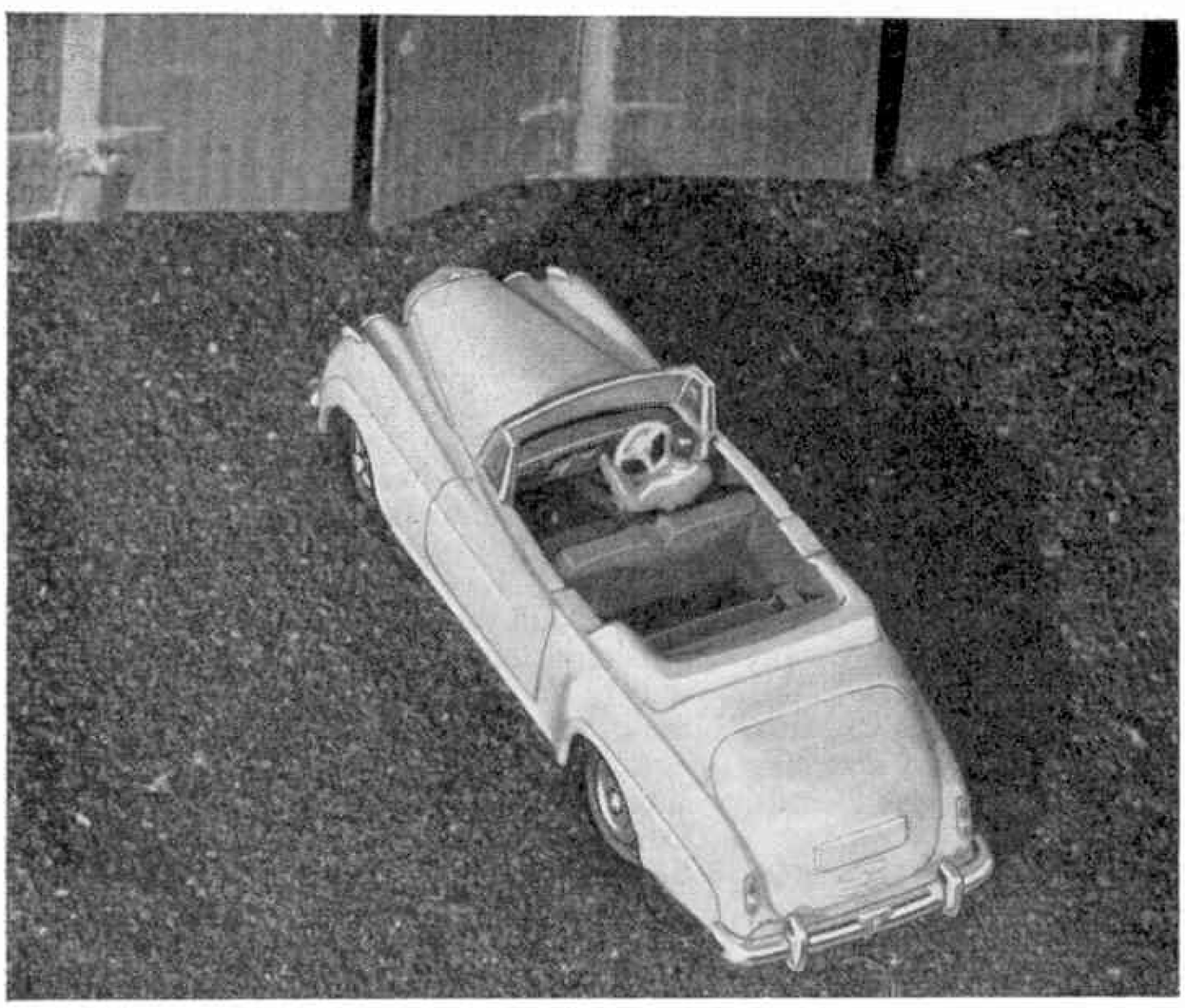
The coming of better weather also brings thoughts once again of layouts planned in the open air, and the latest Dinky Toys model, which you see illustrated below, has an atmosphere of the open spaces about it. A further addition to the line of luxury models which are making such a hit with Dinky Toys collectors everywhere, it is a realistic miniature of the famous Bentley S2 Coupe, magnificently modelled to suggest all the immense power and thrust that is in the actual car itself. It has particular application to outdoor scenes since it is modelled with the hood down and is provided with a driver who sits hatless at the steering wheel.

The Bentley Coupe follows on in the line of luxury cars begun by the Rolls-Royce Silver Wraith (Dinky Toys No. 150), which has been acclaimed by readers and collectors all over the world. Second in the series was the Mercedes-Benz 220SE about which I wrote last month.

Owing to lack of space I was unable, on that occasion, to show you the Mercedes in an appropriate setting, but I can make good that omission this month. The photograph at the bottom of the next page shows this exciting model travelling at speed along a motorway. You can tell it is moving faster than the other cars on the same carriageway because it has taken up a position in the outside, or overtaking, lane, As a matter of interest, how can you tell that our motorway is not a replica of the M1? The answer to this question is, of course, that our motorway has only two traffic lanes per carriageway, whereas the M1 has three. The other models shown in the photograph are the B.O.A.C. Coach (No. 283), the Standard Atlas Kenebrake (No. 295), the Humber Hawk (No. 165) and the Triumph Herald (No. 189). All are current Dinky Toys models.

This smiling youngster is Graeme Roberts of Wembley, Middlesex, a £2 prize-winner in one of the recent Dinky Toys Competitions.

Now, here are details of the fine new Bentley just added to the Dinky Toys list. In addition to possessing Directional Control, four-wheel suspension, windscreen, seats and steering wheel, it has a completely new feature in Dinky Toys models—a well-detailed, walnut-coloured dashboard.



A bird's eye view of the new Bentley, as the driver manoeuvres outside his garage, shows in detail the neatly-folded hood, the steering wheel and the smart dashboard.

Elegant grey finish

The car itself is finished in an elegant light grey gloss with maroon upholstery and plated silver radiator, bumpers and lights. It even has simulated twin spot-lights on the front bumper, and the final touch of realism is the driver's neat dark grey suit. The folded tan-coloured hood contrasts sharply with the light body. The car is number 194 in the Dinky Toys list.

Here is some information about the actual vehicle which I am sure will interest all enthusiasts. The Bentley S2 has an 8-cylinder engine (cubic capacity 6230) which gives it a top speed of about 110 m.p.h. It is fitted with a 4-speed auto-

matic gear-box and twin S.U. carburetters. It will cruise comfortably at 90 miles an hour and, in all, is a very powerful car.

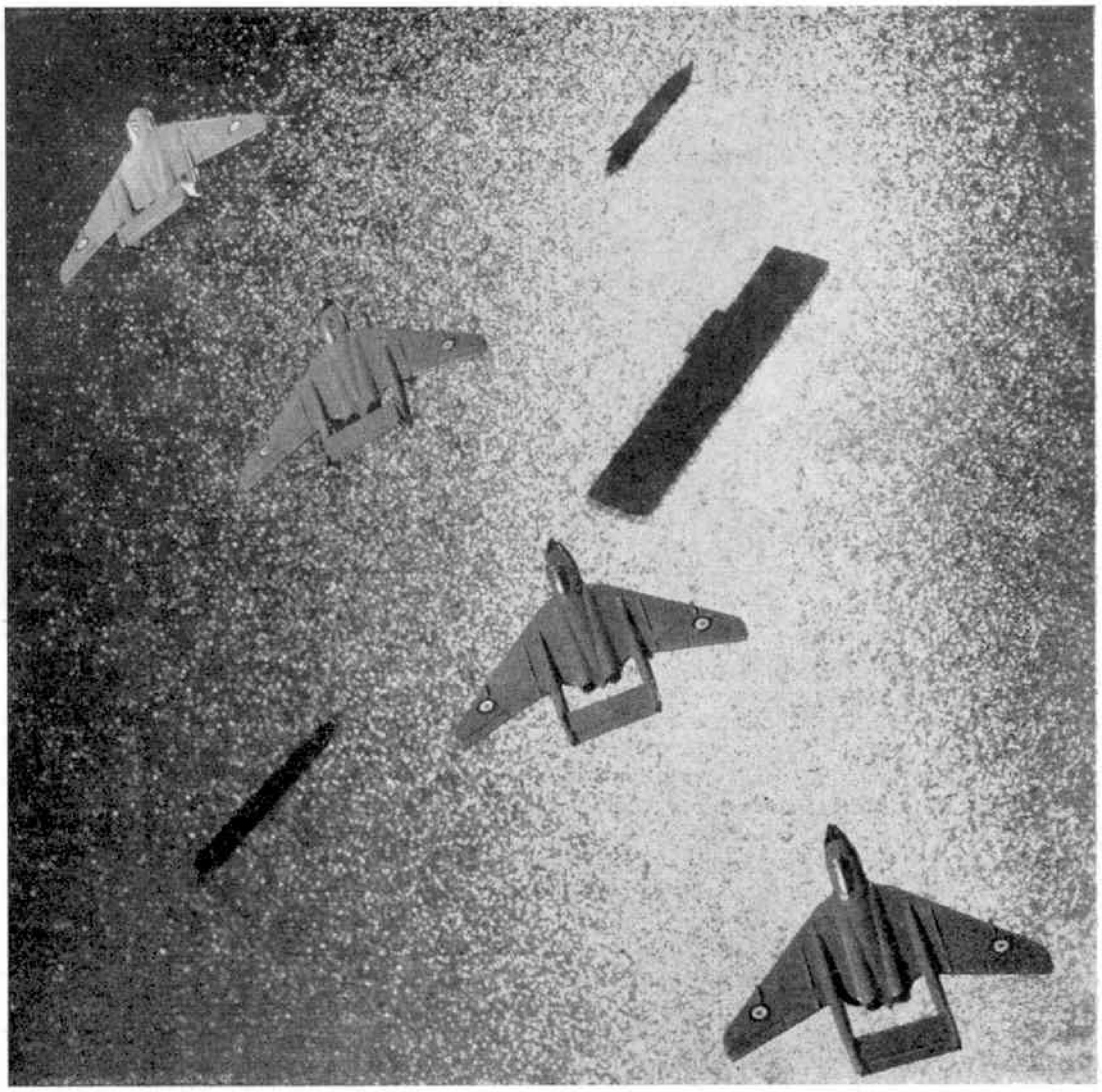
While on the subject of power, there are not many machines more powerful than jet propelled aircraft, and especially carrier-based planes which have only a short take-off run before they hurtle into the sky. The photograph at the top of this page illustrates the de Havilland 110 Sea Vixen Fighter which is the most recent aeroplane to be added to the Dinky Toys range. Number 738, it has been available since late last year. The four aircraft are flying over their mother aircraft carrier and her protective escort. They are probably just returning from an exercise over the ocean and are making a circuit prior to landing.

This photograph has, indeed, the fully authentic touch about it and one is almost prepared to imagine the photographer snapping the scene from a plane flying above the Sea Vixens themselves. Yet the picture was taken in a studio and its significance is two-fold—it shows what can be done with forethought (and good camera work!) and how very realistic the Dinky Toys aircraft models are.

How they began

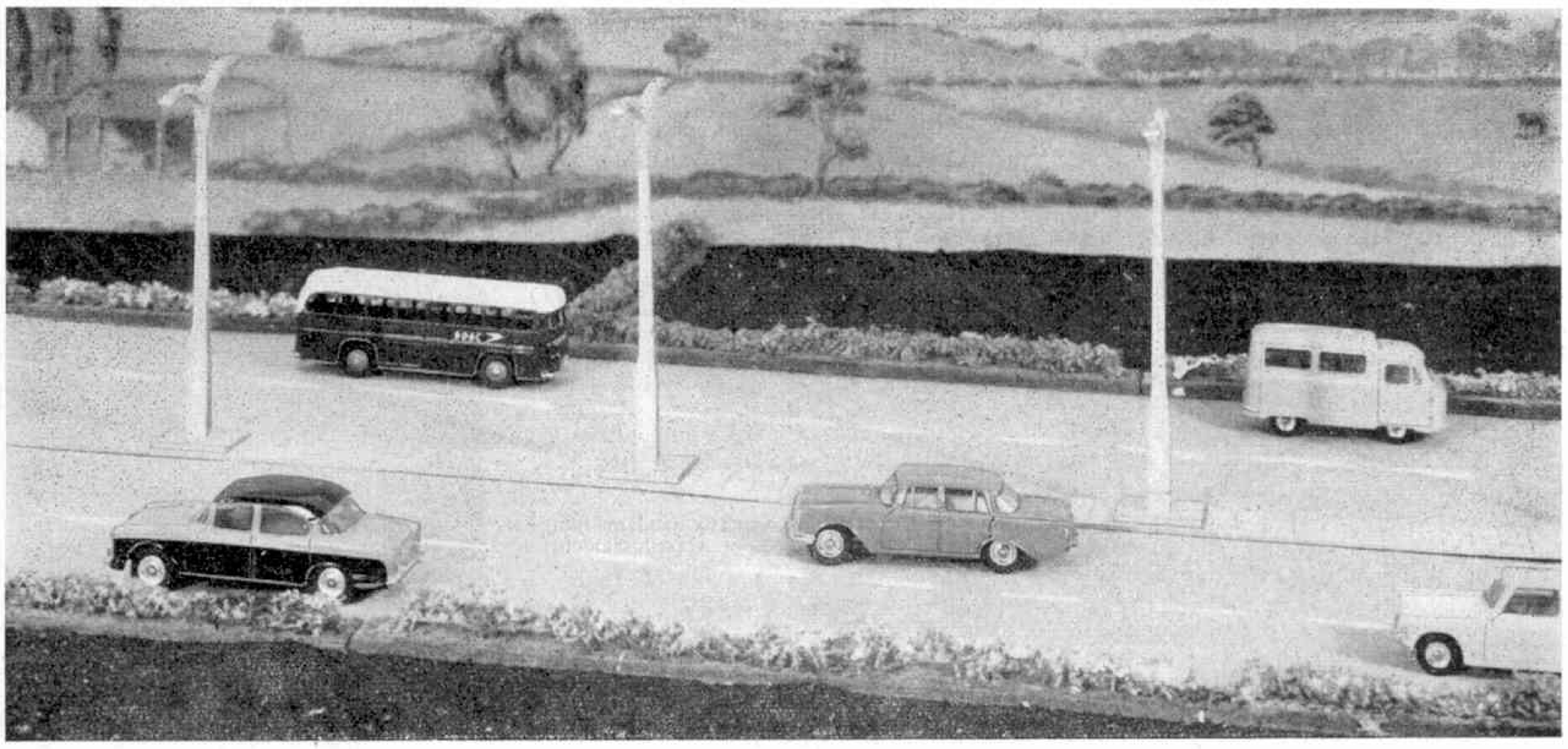
And now I want to touch on a topic that is constantly being raised by readers in their letters to Binns Road, and that is the history and development of Dinky Toys. It is a subject that fascinates people and I thought I would like to deal with it very briefly this month.

The predecessors of the models which you now know as Dinky Toys actually came into being long before the second world war, but (*continued on page 111*)



WINGS OVER THE NAVY

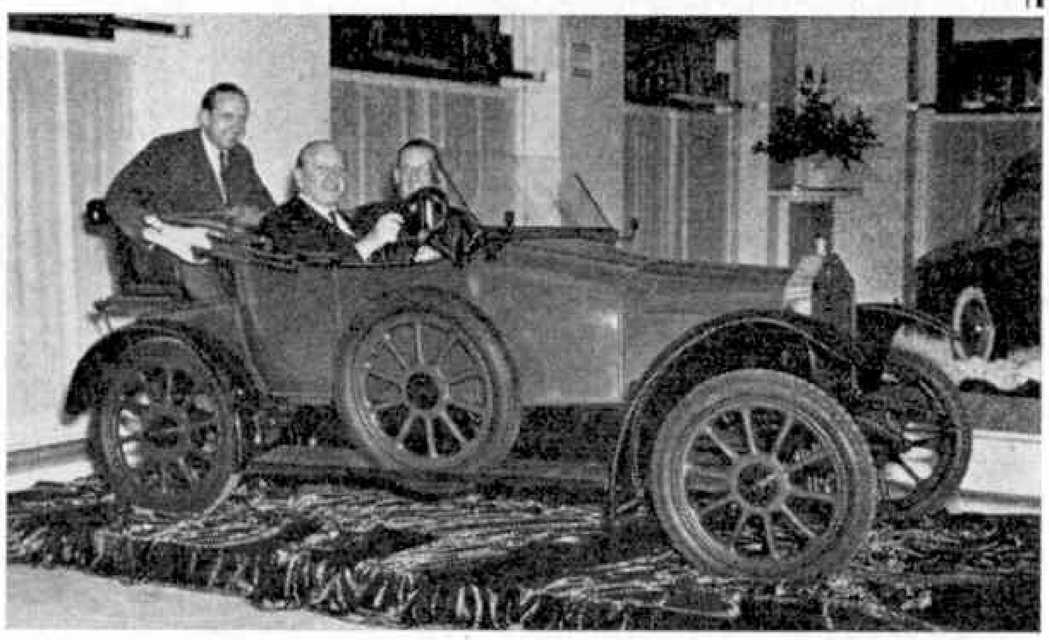
That might well be the title of this picture but, as "Toyman" points out in his Notes, this clever view was taken in a studio. Four Dinky Toys models of the Sea Vixen are pictured as if in line astern making a circuit over the aircraft carrier on which they are based.



In this modern roadside scene Dinky Toys model No. 186, Mercedes-Benz 220SE is seen in the centre of the picture.

THEY WERE DIFFERENT THEN

No. 2. The Singer Gazelle



Two generations of the Rootes family are seen here with the car that helped to found their business—a 10 h.p. 1912 Singer.

THE honoured name of Singer is one of the oldest in the British motor industry. Originally established to build bicycles about 76 years ago, the company later went on to design and manufacture motor cycles. The quality of George Singer's products was such that he numbered one queen—of Portugal—two princesses, two grand duchesses, thirteen countesses and thirty-one peeresses among his cycle clients.

The first Singer car, a two-seater with pneumatic tyres, spare wheel and all-weather equipment, appeared in 1904. By 1909 four Singer models were being made, ranging from a 7.9 h.p. twin-cylinder to a 24.8 h.p. type. Shortly afterwards Singers began to win laurels on the track and break many records.

In 1912 the firm produced a model which was to become historic—the Singer 10. Only a quarter of the size of its contemporaries, it had a four-cylinder engine, a gearbox incorporated with the back axle, a petrol consumption of more than 40 m.p.g. and was priced at £195. It was the first really small horse-power car which was not an adaptation of a motor-cycle; spectators at Brooklands were astonished to see the tiny car reeling off lap after lap at 64 m.p.h. By 1914 it had captured all the one to nine-hours Brooklands records for under 1,100 c.c. class.

It was not until 1923 that this gallant little car received a substantial face-lift. In that year the Singer 10 four-seater was introduced for the modest sum of £250 —about half the current price of cars offering comparable accommodation. In 1934 Singers became the first British manufacturers to fit independent front suspension and to produce a car with a clutchless gear change. They also brought out one of the world's first streamlined cars, the Singer Airstream.

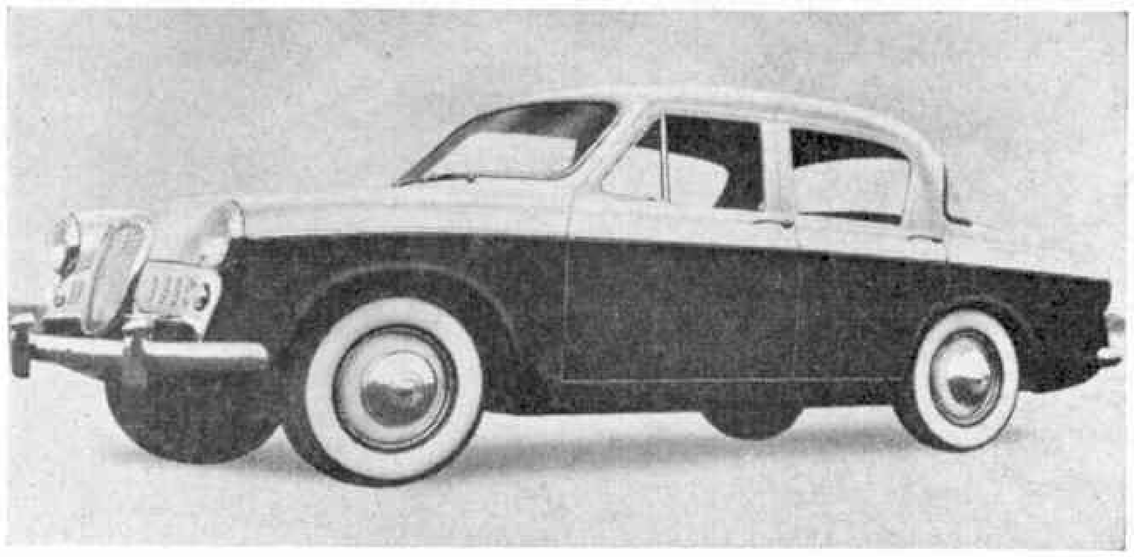
Enthusiasts of my generation will remember with great affection the 9 h.p. and 1½ litre Le Mans models which performed so well in sporting events in the

By PATRIC BAKER

middle '30s. More than 1,000 of these cars took part in races and rallies in 1934/35. Seventy-five per cent of them achieved successes—the manufacturers' team prize among them—and not one retired. At this time, Singers were the only people in the world to guarantee their models against cylinder wear.

The basic overhead-camshaft design of the Le Mans engine was retained in the post-war S.M. 1500 saloon which later became the Singer Hunter. Economic conditions of the period were, however, unhelpful to the small manufacturer and in December 1955 the Singer Company became part of the Rootes Group.

This fusion of resources (*cont. on p. 111*)



The modern Singer Gazelle Saloon.

ROAD SAFETY NOTES

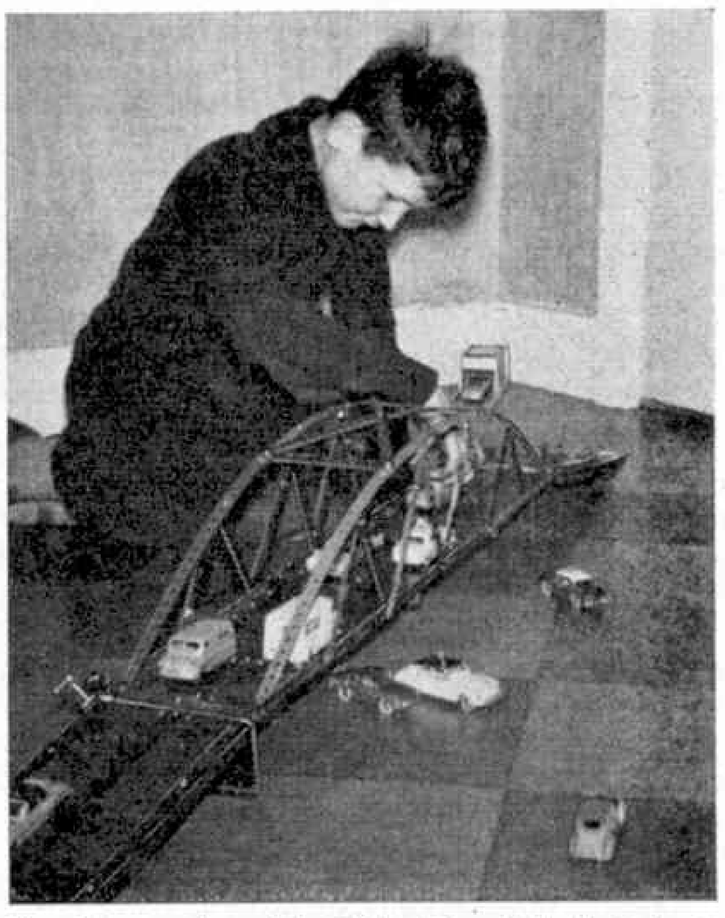
Now Is The Time To Check Up

Few will be sorry to see the end of winter and we certainly look forward to brighter and lighter days.

Easter this year is early and that means, if the weather is kind, that many will take the opportunity to be out and about; cycles which have been little used during the winter will be brought into new life. Now, therefore, is the time to give them a good going over; to check on brakes, steering, wheels, tyres and all the other parts that are so essential to safety.

If you knew that a car in which you were to travel had not been serviced, that its brakes were faulty, its steering erratic and its tyres threadbare, would you feel very happy about it? Why, then, trust yourself to a cycle of uncertain roadworthiness.

The roads will be busier than ever before; machines not in proper condition are an invitation to disaster. Make sure that your machine is really fit to carry the responsibility of your safety. NOW, at the very beginning of the season, is the time to do it.



Here is a member of the Dinky Toys Club Nederland. He is Pim Wittop Koning, of Amsterdam. This picture, taken by Pim's elder brother, shows him with some of his Dinky Toys models and a bridge which he built in Meccano.

"I Used Meccano As A Boy," Says The Designer of

THE BAILEY BRIDGE

A STORY OF ACHIEVEMENT

NEARLY 22 years ago there began the biggest war in history—World War II. The small British Army was excellent in many respects but its equipment, including bridging materials, was woefully inadequate to meet the challenge of "Blitzkrieg."

There were folding boat bridges for light loads, and pontoon equipment which would just take the 26-ton Matilda tank. There were small and large box-girder bridges and Hamilton bridges for carrying 30-ton loads over 120 and 130 foot spans. These heavy bridges took a week to erect, which was too long for the pace of mechanised warfare.

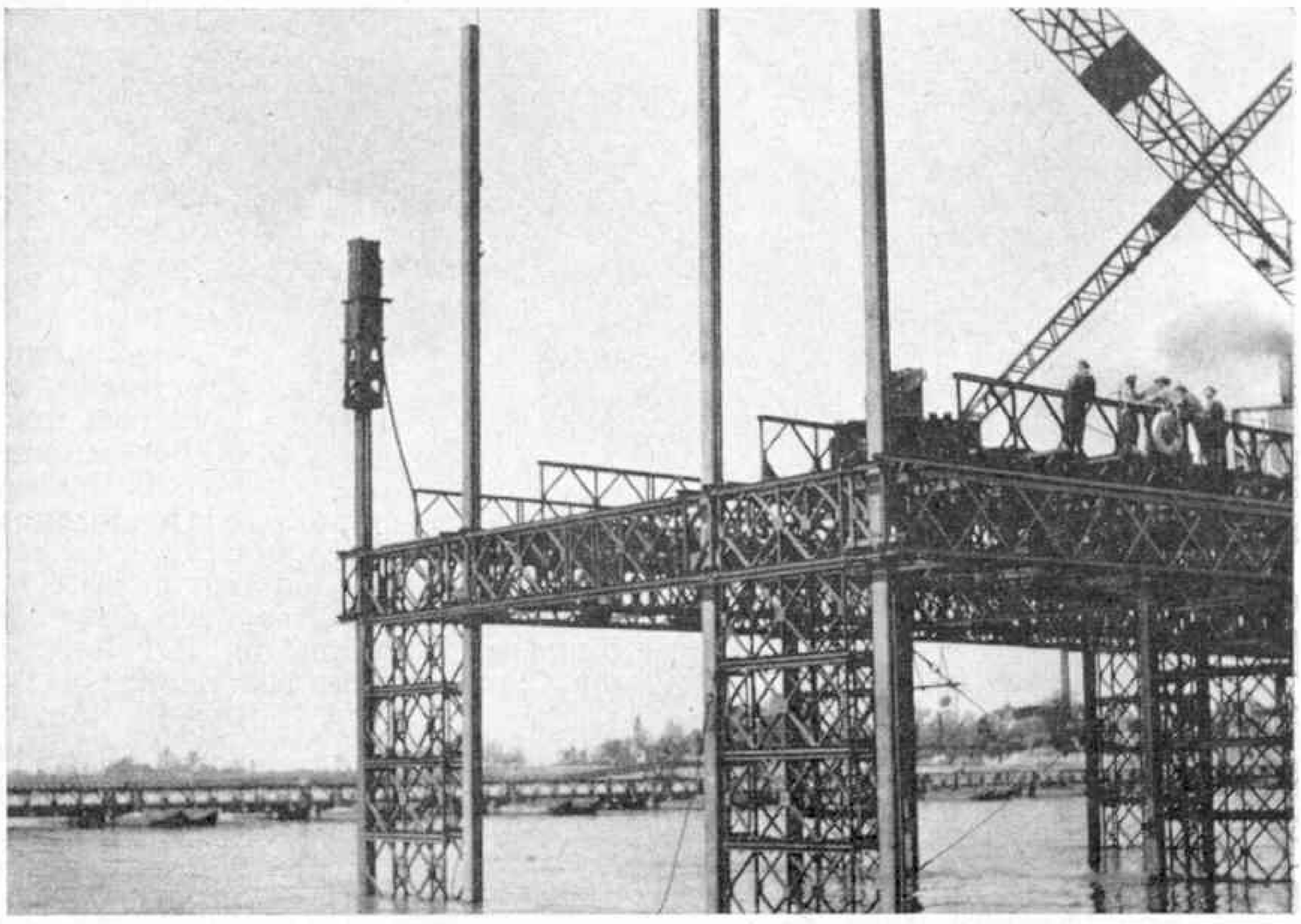
Working for the Ministry of Supply at that time was a bridge designer, D. C. Bailey, who was later to become Sir Donald Bailey, O.B.E. For some time he had had an idea of what was really required—a bridge which could be quickly erected and take a heavier load over longer spans, and, what was vitally important, one capable of mass production on a flow line basis.

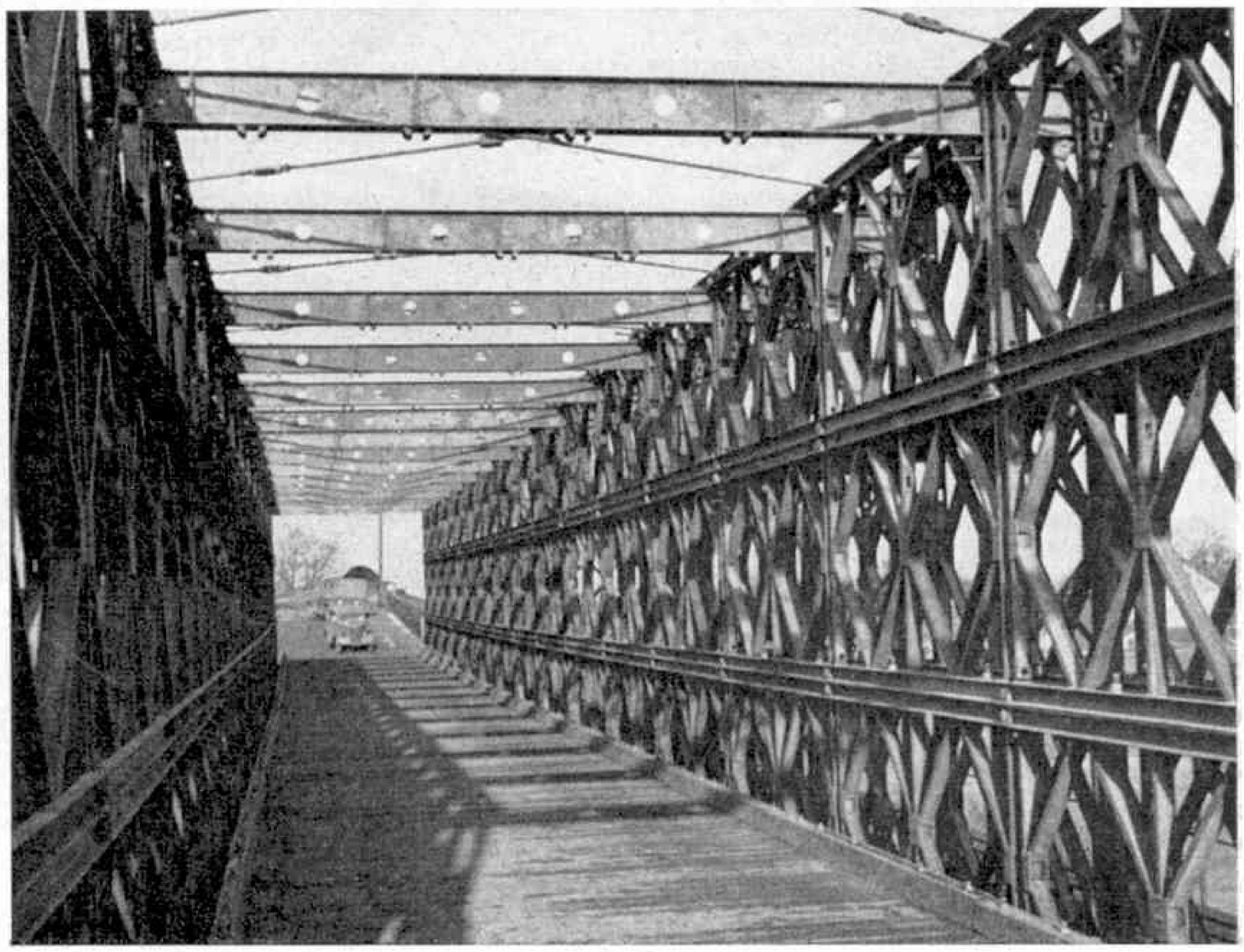
The loss of most of our existing bridging material at Dunkirk, and the coming of the heavier Churchill tank, made the problem doubly urgent. Work continued non-stop and by 1941 the idea had taken shape. To achieve longer spans and greater load capacity the bridge was made up from girders, each of which contained a number of simple parts. Bailey bridging was designed as an extremely flexible method of crossing rivers: light or heavy, short or long bridges could be made by altering the number of parts used and the assembly pattern.

In order to make the bridge quick to erect the basic sub-units had to be just the right size. The pieces were to be readily transported and easily joined, often by single pins, so that long specialist training for the troops might be avoided. Bridges could be of various types, fixed, floating or suspension, and piers could be made of the same material.

Bailey bridging quickly replaced nearly all the existing types of equipment and in Britain alone 650 firms between them made almost enough bridges to stretch from London to Holyhead, if placed end to end. In the United States, too, large quantities of Bailey bridging material were manufactured and later used in the Far East. Between the Normandy landings, in June 1944, and the end of the war in N.W. Europe the following May, 1,445 Bailey bridges were erected.

The longest Bailey bridge ever made crossed the Rhine at Dusseldorf, and was 2,391 feet long. In erecting this the Royal Engineers had some formidable problems to overcome. The water level of the Rhine was liable to vary by as much as 30 feet, there was icing to contend with in winter, and the current reached speeds of up to seven knots. Furthermore, in order not to interrupt river traffic there had to be a navigational opening 100 feet wide and 29 feet high. Plans were completed in July 1945 for a bridge with fourteen piers. Work started on (*Cont. on page 110*)





The top picture shows piles being driven in during the construction of a 2,391-foot Bailey bridge over the Rhine, in 1945. Below: A triple-tiered Bailey bridge built during training exercises in the United Kingdom.

"Spanner's" Special Section for Juniors

Easy Model-Building

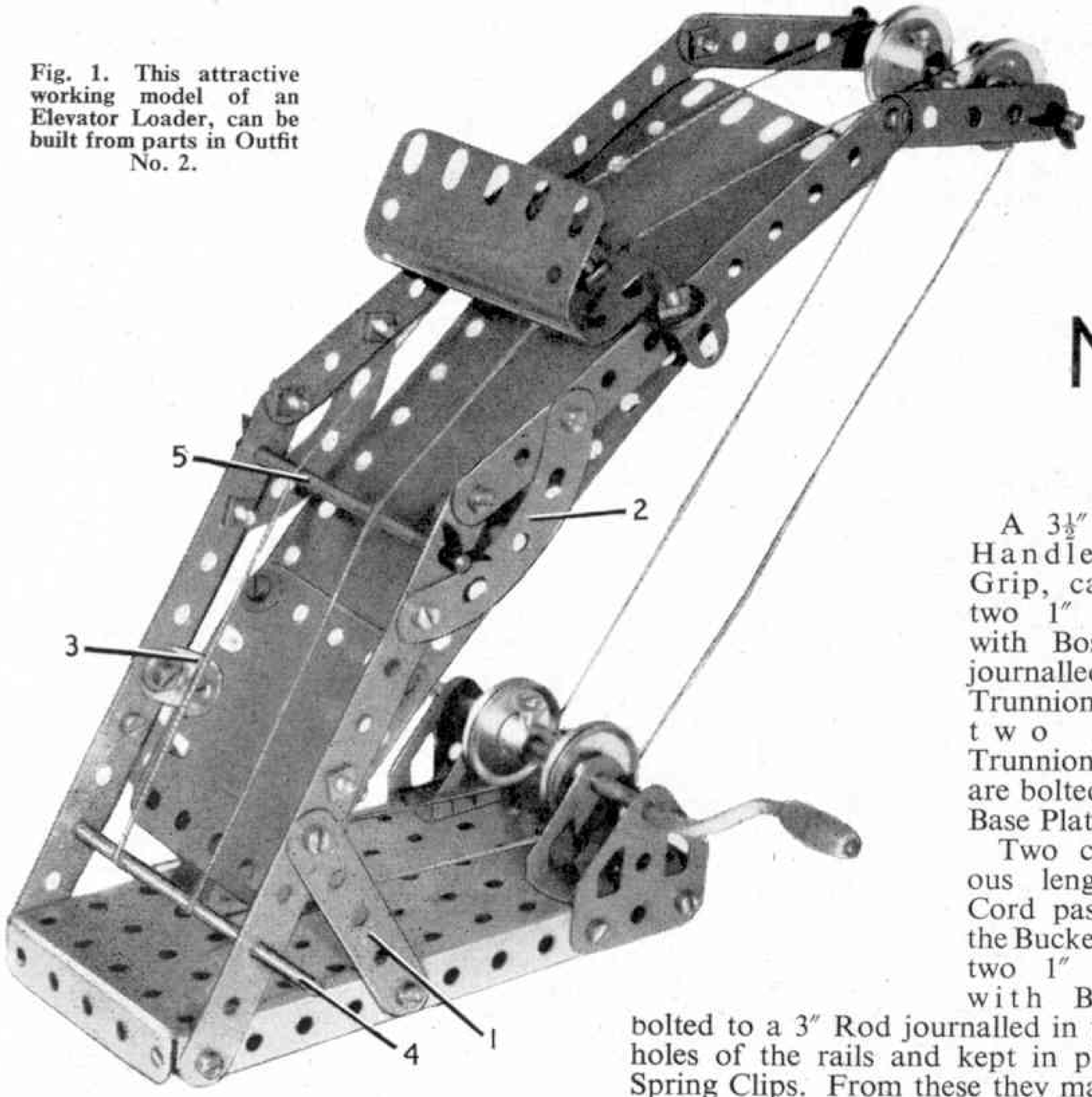


Fig. 1. This attractive working model of an Elevator Loader, can be built from parts in Outfit No. 2.

Elevator Loader

The model Elevator Loader shown in Fig. 1 can be built from parts in Outfit No. 2, and is designed for picking up, from ground level, loads of sand, or other materials by means of buckets fixed to an endless belt. The buckets then travel upward and when they reach the top of the supporting framework they tip over and discharge their loads into a waiting lorry, storage bin or other receptacle.

The rails on which the bucket belt travels are each made up of two $5\frac{1}{2}''$ Strips and a $2\frac{1}{2}''$ Strip shaped as shown and they are bolted to a $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plate which forms the base. Further support is given by $2\frac{1}{2}''$ Strips 1 and the rails are also strengthened by $2\frac{1}{2}''$ Curved Stepped Strips 2.

An $8\frac{1}{2}''$ Flexible Plate made up of two $2\frac{1}{2}'' \times 2\frac{1}{2}''$ and one $4\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate is bolted to a $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip (hidden in the illustration by the bucket) and the Angle Brackets 3.

The Bucket is a "U" Section Plate bolted to a Laminated $3\frac{1}{2}''$ Strip made up of two $2\frac{1}{2}''$ Strips. An Angle Bracket is bolted through the end holes of this Strip.

A $3\frac{1}{2}''$ Crank Handle with Grip, carrying two 1" Pulleys with Bosses, is journalled in two Trunnions and two Flat Trunnions which are bolted to the Base Plate.

Two continuous lengths of Cord pass from the Bucket round two 1" Pulleys with Bosses bolted to a 3" Rod journalled in the end holes of the rails and kept in place by Spring Clips. From these they make one complete turn around the 1" Pulleys on the Crank Handle, pass around a $3\frac{1}{2}''$ loosely journalled Rod 4, also a 3" Rod 5 held by Spring Clips and finally are attached to the bucket. When the handle is turned either way the Bucket moves up or down as is required.

Parts required to build the Bucket Loader: 4 of No. 2; 6 of No. 5; 4 of No. 12; 1 of No. 16; 2 of No. 16b; 1 of No. 19g; 4 of No. 22; 4 of No. 35; 34 of No. 37a; 34 of No. 37b; 2 of No. 38; 1 of No. 40; 1 of No. 48a; 1 of No. 52; 2 of No. 90a; 2 of No. 126; 2 of No. 126a; 2 of No. 190; 1 of No. 191; 1 of No. 199.

A Helicopter for Outfit No. 4

The base of the cabin and cockpit of the fine model Helicopter shown in Figs. 2 and 3 consists of two $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strips 1 and 2, joined together by a $2\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate 3. Another $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip 4 is bolted to Double Angle Strip 2 and overlaps it 1 hole, the Flexible Plate 3 being bolted through this hole. Two Semi-Circular Plates are bolted to Double Angle Strips 4, the same bolts holding the leg,

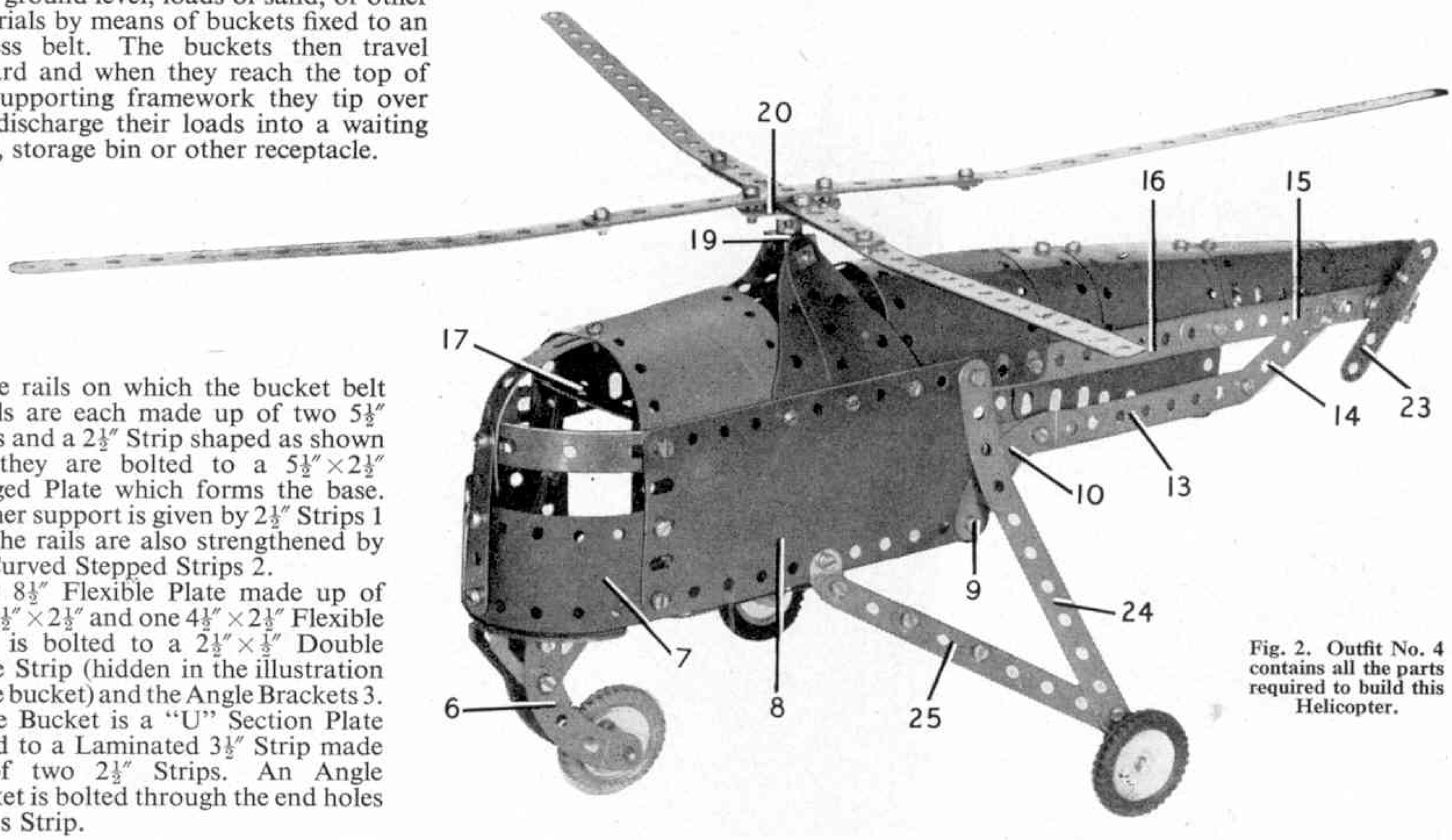


Fig. 2. Outfit No. 4 contains all the parts required to build this Helicopter.

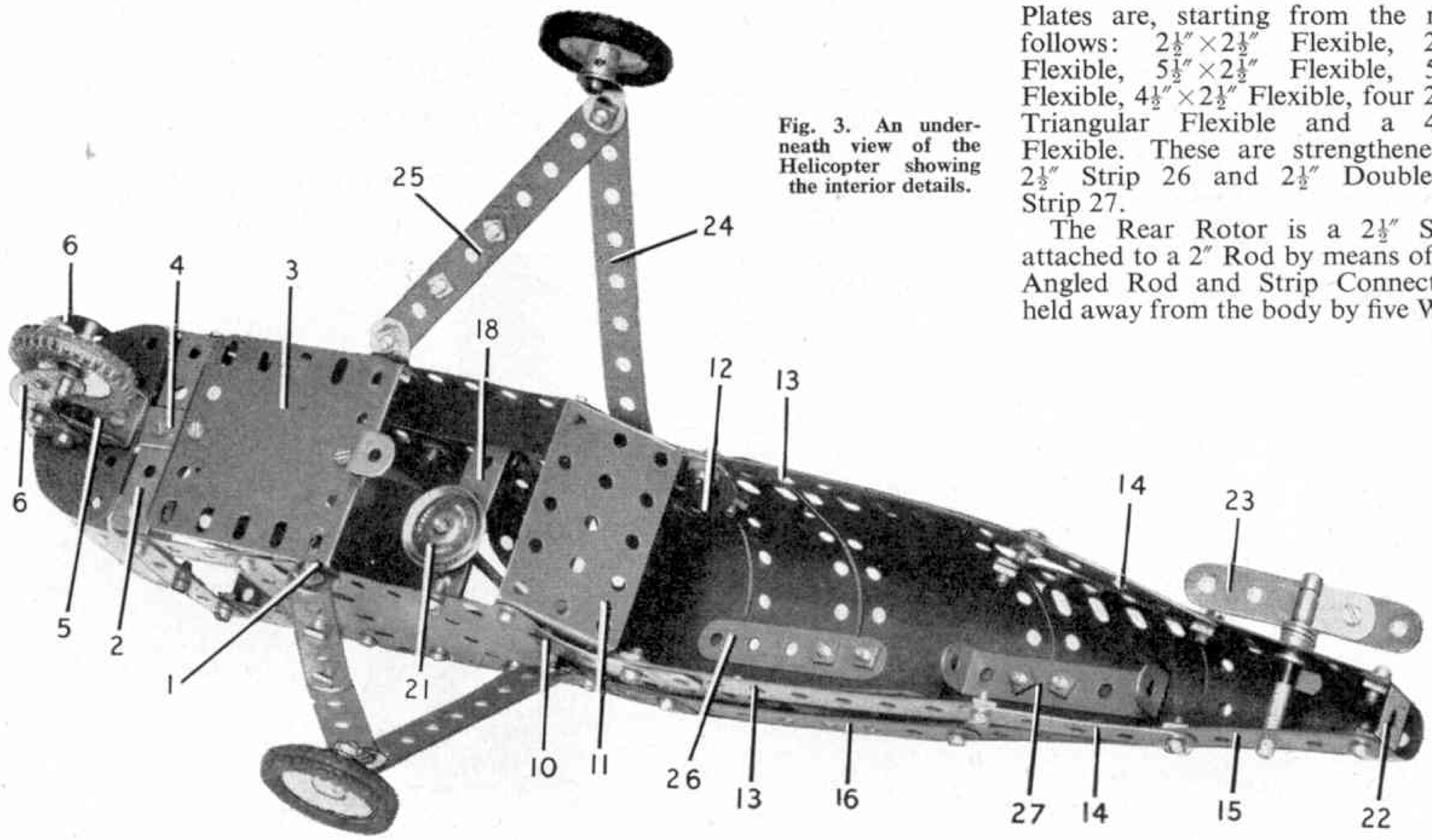


Fig. 3. An underneath view of the Helicopter showing the interior details.

Plates are, starting from the rear, as follows: $2\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible, $2\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible, $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible, $5\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible, $4\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible, four $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Triangular Flexible and a $4\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible. These are strengthened by a $2\frac{1}{2}''$ Strip 26 and $2\frac{1}{2}''$ Double Angle Strip 27.

The Rear Rotor is a $2\frac{1}{2}''$ Strip 23 attached to a 2" Rod by means of a right Angled Rod and Strip Connector and held away from the body by five Washers.

which supports the nose-wheel, in place. This leg is made up of two Trunnions 5 and two Curved Stepped Strips 6.

A $5\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plate 7 is bolted to the front lug of the Double Angle Strip 4 and also, together with the $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate 8, to one lug of the Double Angle Strip 2. Bolt 9 joins the Curved Stepped Strip 10 and the Flexible Plate 8 to a $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Flanged Plate 11. A Flat Trunnion 12 and a $5\frac{1}{2}''$ Strip 13, joined together by the same bolts, connect Plate 8 to Stepped Strip 10. A $2\frac{1}{2}''$ Strip 14 is bolted to this Strip and also to a $5\frac{1}{2}''$ Strip 15, which is in turn bolted to another $5\frac{1}{2}''$ Strip 16, both of which are connected to the Flexible Plates as shown.

The other side of the model is similar in construction except the place of the $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Plate 8 is taken by two $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plates, a $2\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate and the open Doorway or Hatch. The lower sill of the Hatch is formed by bolting a $2\frac{1}{2}''$ Strip to the other lug of Double Angle Strip 2 and to one of the $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plates on the other side of the Doorway.

The cockpit consists of three Formed Slotted Strips and one $2\frac{1}{2}''$ Strip, bolted as shown, and strengthened by a $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip 17.

The Rotor Shaft is a $3\frac{1}{2}''$ Rod journalled in a $2\frac{1}{2}''$ Double Angle Strip 18 and Double Bracket 19, and held in place by a Bush Wheel 20 and 1" Pulley 21. The Rotor Blades are two $12\frac{1}{2}''$ Strips overlapped 11 holes and bolted to the Bush Wheel 20.

The sides are held together at the rear by a Double Bracket 22, and the top

The main undercarriage is a $5\frac{1}{2}''$ Strip 24 and a $4\frac{1}{2}''$ Strip 25, made up of a $3\frac{1}{2}''$ Strip and a $2\frac{1}{2}''$ Strip. The wheels are 1" Pulleys with Tyres and are journalled in Obtuse Angle Brackets by means of $\frac{3}{8}''$ Bolts through the bosses.

The Nose-wheel is also a 1" Pulley with Tyre on a 1" Rod.

Parts required to build the mode Helicopter: 4 of No. 1; 8 of No. 2; 2 of No. 3; 9 of No. 5; 2 of No. 11; 4 of No. 12c; 1 of No. 16; 1 of No. 17; 1 of No. 18b; 4 of No. 22; 1 of No. 24; 1 of No. 35; 72 of No. 37a; 68 of No. 37b; 5 of No. 38; 6 of No. 48a; 1 of No. 51; 4 of No. 90a; 6 of No. 111c; 1 of No. 125; 2 of No. 126; 2 of No. 126a; 3 of No. 142c; 2 of No. 188; 2 of No. 189; 2 of No. 190; 2 of No. 191; 2 of No. 192; 1 of No. 199; 1 of No. 200; 1 of No. 212a; 2 of No. 214; 3 of No. 215; 4 of No. 221.

THE NORWICH TRAMWAYS 1900-1935

There appears to be an increasing interest in the past and present passenger transport systems of Britain, the numerous histories written in recent years having been well received. The Tramway and Omnibus Historical Society has produced this commemorative booklet of the tramway system which once served the city of Norwich. This was an example of the smaller undertaking which remained much the same from first to last, and saw no modernisation, not even being the possessor of a vehicle with an enclosed upper deck. Track passing along narrow, old-world streets, the greater part of it being single, precluded any developments and the year 1935 saw the closing of this little system which in its somewhat short life had revolutionised local transport.

Several illustrations show the appearance of the vehicles, and while it is a fact that the exteriors of tramcars built in the earlier years of the century differed greatly throughout the country, the interiors were much the same everywhere. The view on page 15 of this interesting little book of 24 pages will remind older readers of countless journeys made in the past.

Copies of the booklet can be obtained from Mr. N. F. Smith, 13 Broom Avenue, Thorpe St. Andrew, Norwich, price 5/6d. post free.

BEST-KEPT STATIONS

Winners for 1960 of the B.R. Scottish Region's Best-Kept Stations competition for large stations were Aberdeen Station in Group A and Inverness in Group B. Group A competitors included Aberdeen, Edinburgh (Waverley), Edinburgh (Princes Street), Glasgow (Central), Glasgow (St. Enoch) and Perth, and Group B covers Dundee (Tay Bridge), Glasgow (Buchanan Street), Glasgow (Queen Street), Inverness and Paisley (Gilmour Street). The competition was, as always, keenly contested.

At a ceremony in Edinburgh, attended by the Traffic Managers of the East Coast, Northern, and Glasgow & South West Divisions, Mr. A. J. Hay, Station Master at Aberdeen, was presented with a cheque for £50 and Mr. D. Murphy, Station Master at Inverness, with a cheque for £25.

A MODEL FOR OUTFIT No. 7

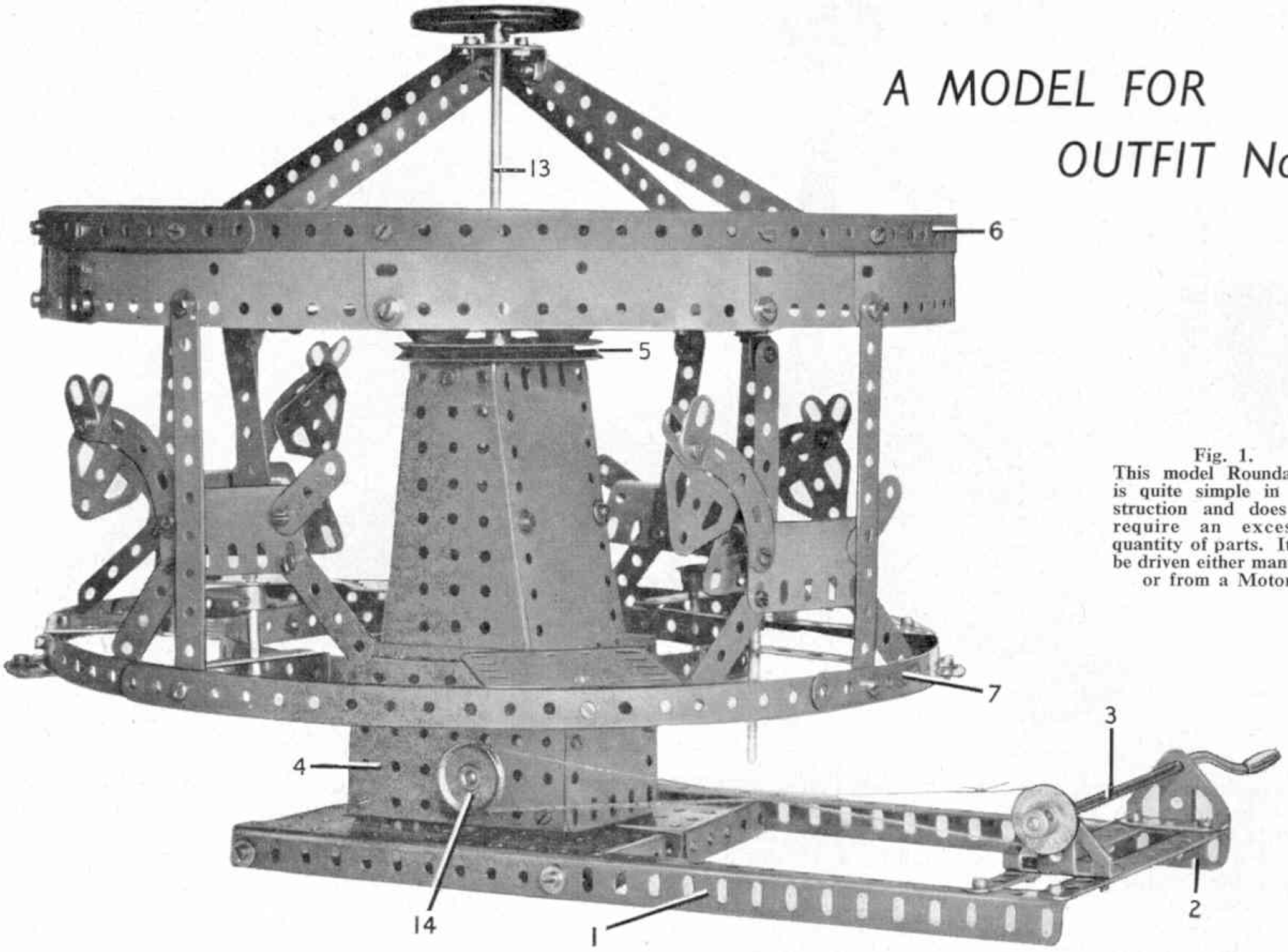


Fig. 1.
This model Roundabout is quite simple in construction and does not require an excessive quantity of parts. It can be driven either manually or from a Motor.

Fairground Roundabout

Fairground Roundabout

The base of the fine model Roundabout shown in Fig. 1 consists of two 12½" Angle Girders 1 and 2 bolted to two 5½" × 2½" Flanged Plates at one end. At the other end two 5½" Strips are bolted to the Angle Girders as shown. Two Trunnions are bolted to the 5½" Strips and they provide a mounting for a Crank Handle 3. Two Double Angle Strips are bolted to the Flanged Plates 3½" apart and to these are bolted two 3½" × 2½" Flanged Plates, one of which is marked 4, and two 2½" × 2½" Flexible Plates. Two 4½" Flanged Sector Plates, to which are bolted two 4½" × 2½" Flexible Plates, are bolted to the Flanged Plates as shown. A 2½" × ½" Double Angle Strip is bolted at the upper ends of the Flanged Sector Plates and to this a 3½" Pulley 5 is attached.

The top of the revolving structure consists of four 12½" Strips curved and joined to form a circle 6, and at the bottom four 12½" Strips are curved and joined together to form another circle 7. The 12½" Strips overlap five holes in both top and bottom circles, but those at the top are edged with six 5½" × 1½" Flexible Plates and with five 2½" × 1½" Flexible Plates. Four 5½" Strips 8 join the upper circle to the lower one as shown. Two further 12½" Strips are curved to form an inner ring 9 and this is joined to the outer ring 7 by four 2½" × ½" Double Angle Strips.

Two 12½" Strips attached to the top ring of Strips by Angle Brackets, are bolted to a Bush Wheel 10 at right angles to each other. Four 5½" Strips acting as bracing stays are bolted to the 12½" Strips by Angle Brackets and at their other ends are fixed to another Bush Wheel.

Each of the four horses consists of a 2½" × 2½" Curved Plate to which are bolted three 2½" Strips and a Curved Stepped Strip. A Flat Trunnion to form the head and two Fishplates for the ears, are then bolted to the Curved Stepped Strip. A 3½" Strip is bolted to the Curved Plate and then lock-nutted to an Angle Bracket, which is connected to a Collar 11 attached to a 4½" Rod 12. The Rod is mounted in two 1" × 1" Angle Brackets fixed to the 12½" Strips bolted to Bush Wheel 10, and a 1" Pulley with Tyre attached is also fixed on the Rod. The horses are also retained in place by a 2" Rod connected to the body in two cases by a Crank bolted to a Double Bracket fixed to the 2½" × 2½" Curved Plate. The Rod passes through the centre hole of one of the 2½" × ½" Double Angle Strips in the lower ring of the superstructure. The other two horses are also held in place by a 2" Rod, but in these two cases the Rod is connected to the 3½" Strip by a Rod and Strip Connector.

The superstructure is mounted on a 11½" Rod 13, which is fixed in the two Bush Wheels and is then passed through the boss of the 3½" Pulley 5. It is also passed through the centre hole of a 2½" Strip bolted across the tops of the Flanged Plates 4. A Road Wheel is mounted on the upper end of the Rod to form a cap. At its lower end the Rod carries a ½" Pinion and this engages a Worm mounted on a 3½" Rod passed through the Flanged Plates 4 and held in place at one end by a Collar with screw. At its other end the 3½" Rod is fitted with a 1" Pulley 14. A belt of Cord connects this Pulley with a ¾" diameter Flanged Wheel mounted on the Crank Handle 3.

Parts required to build the model Roundabout: 12 of No. 1; 10 of No. 2; 4 of No. 3; 9 of No. 5; 4 of No. 6a; 2 of No. 8; 10 of No. 10; 4 of No. 11; 16 of

No. 12; 4 of No. 12a; 1 of No. 13; 2 of No. 15a; 2 of No. 15b; 1 of No. 16; 2 of No. 17; 2 of No. 18a; 1 of No. 19b; 1 of No. 19h; 1 of No. 20b; 5 of No. 22; 1 of No. 24; 1 of No. 24a; 1 of No. 26a; 1 of No. 32; 1 of No. 35; 150 of No. 37a; 148 of No. 37b; 22 of No. 38; 1 of No. 46; 8 of No. 48a; 2 of No. 52; 2 of No. 52; 2 of No. 54; 6 of No. 59; 2 of No. 62; 2 of No. 90; 4 of No. 90a; 2 of No. 126a; 4 of No. 155; 1 of No. 187; 5 of No. 188; 6 of No. 189; 6 of No. 190; 2 of No. 191; 4 of No. 199; 2 of No. 212.

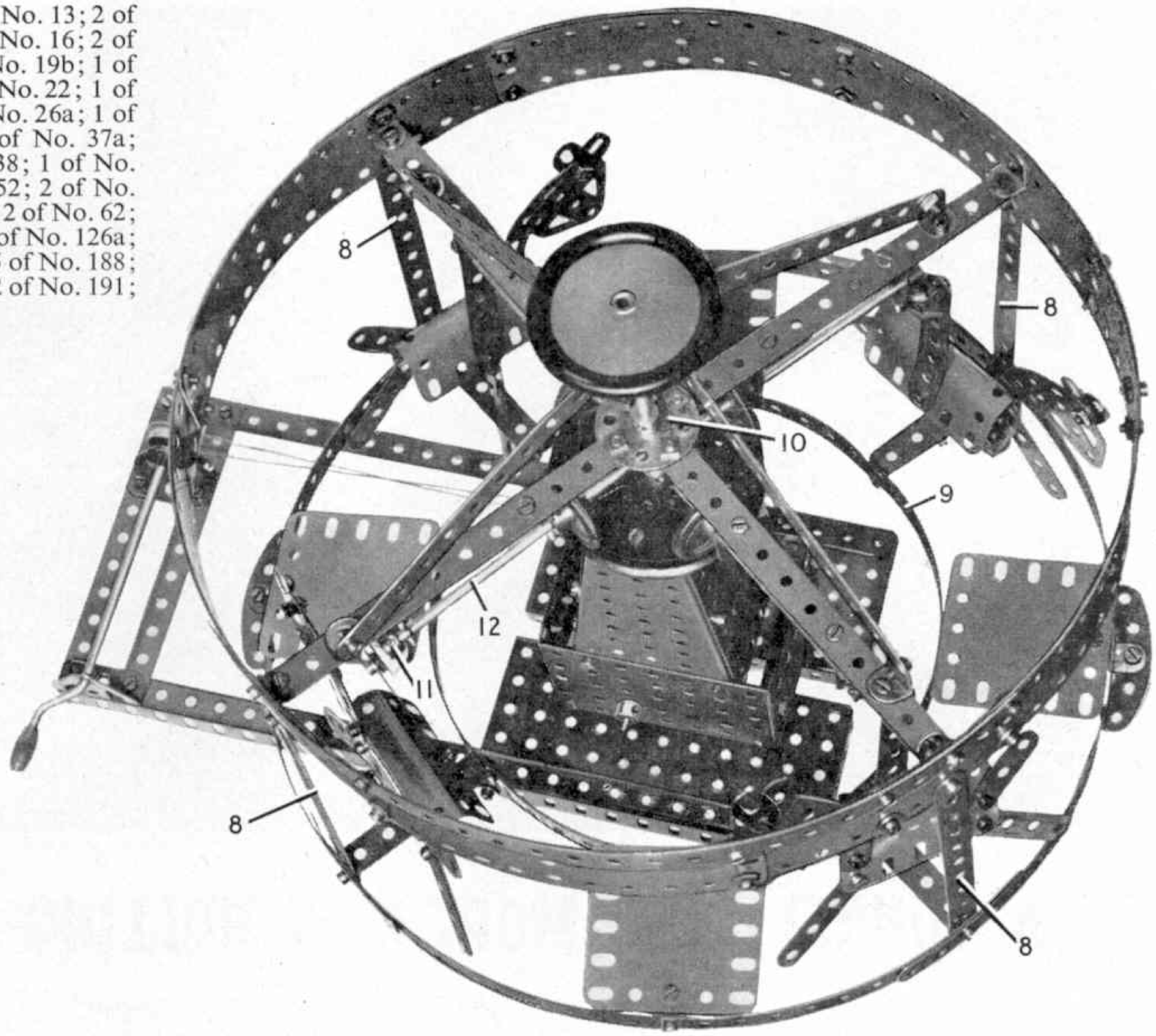


Fig. 2.
This illustration is a view looking down through the canopy top of the Roundabout, which is shown complete in Fig. 1.

NEW MODEL-BUILDING COMPETITION

If you are a Meccano model-builder, no matter what your age may be, you have a chance to win a Cash Prize if you will set to work and build a model of some kind and then send either a photograph or a good sketch of it to "Meccano Competition, Meccano Ltd., Binns Road, Liverpool, 13."

It does not matter what size your Outfit may be—all you need do is to decide on the type of model you would like to build and then set to work to construct it as neatly and realistically as you can. We can assure you that your model will have just as good a chance of success in the competition as any others submitted, no matter how big or elaborate they may be, because when the judges make their awards they will take into consideration the quantity of parts used in a model, and the age of the competitor whose work it is.

For this reason it will be necessary for you to make sure that your name and address, and the age you will be on April 29 next, is stated clearly in Block letters on the back of each photograph or drawing you send.

Have You Sent In Your Entry

Further, in order to ensure that each competitor has a fair chance, entries from model-builders under 14 years of age on April 29 next will be placed in one Section and those from competitors over 14 years of age on that date will be grouped in a separate Section. A separate set of Prizes, details of which are given in the panel at the foot of this page, will be awarded in each Section.

You must post your entry in time to reach Liverpool on or before April 29 next.

In choosing the subject for your model you will be well advised to select something that you can construct strongly and realistically from the parts available to you. It would not be wise to select, for example, a giant locomotive as your subject if you have only a small Outfit. It would be far better to choose something more simple, such as a small crane, which you could probably build up far more realistically and fit with satisfactory operating mechanism. You should always remember that strength, neat construction and a careful endeavour to reproduce the essential details of the prototype, are far more valuable features in a competition model than mere size alone.

Now I do hope that everyone who reads this notice will decide to have a go in this competition. Even should you not succeed in winning a prize, you will find it is jolly good fun taking part and you will gain useful experience that will help considerably in bringing you success in a future contest.

Please remember, the present Competition closes on April 29.

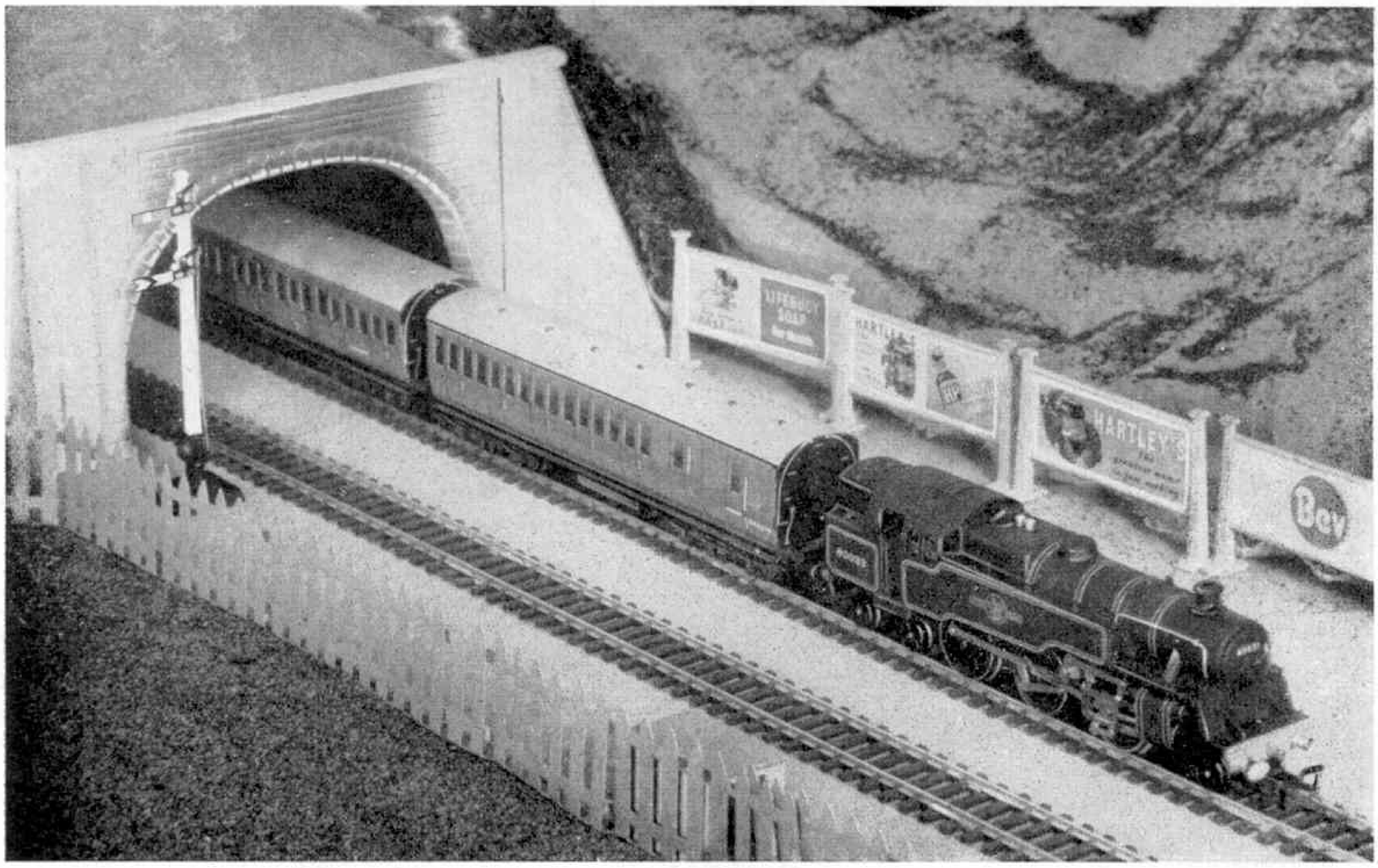
THE PRIZES

The following prizes will be awarded in each of the Sections A and B:

First Prize, cheque for	£4	4	0
Second Prize, cheque for	£2	2	0
Third Prize, cheque for	£1	1	0

Five Prizes each of 10s. 6d.
Five Prizes each of 5s. 0d.

Certificates of Merit also will be awarded.



A TUNNEL, AND MORE NEW ROLLING STOCK

THE picture above includes the Hornby-Dublo Double Track Tunnel, an attractive item that recently became available in the System. I am sure it has already found a place on many layouts.

In its general design and construction it is similar to the Single Track Tunnel, having moulded ends or faces incorporating realistic detail in relief. Adding to the general realism of each Tunnel entrance is the fact that sloping wing walls are included, as you can see in the illustration. The covering of the Tunnel is finished in a realistic manner and on the ordinary simple type of layout, without much scenery, it provides a welcome touch of green. On more permanent systems it is not difficult to include the Tunnel in a scenic modelling scheme, as you can see above. The Tunnel is 16⅜ inches long—nearly two Coach lengths—so that part of your train will be hidden as it makes its way through the bore.

Hornby Railway Company

By the Secretary

It is of interest to note that the Hornby-Dublo Suburban Coaches shown in the photograph are in S.R. Green, and the engine hauling them is the Two-Rail Standard 2–6–4 Tank. Its number, 80033, is actually that of one of the real B.R. Standard Tanks in service with the Southern Region, so the train represents, in miniature, a sight still familiar on certain Southern routes.

Now for an item that will be of particular interest not only to Southern enthusiasts but to practically all Hornby-Dublo owners. That is the appearance in the advertisement pages of this issue of Hornby-Dublo Pullman Cars. These are really fine vehicles and in the umber and cream livery of the Pullman Car Company, and characteristic lettering and marking, they present the authentic "Pullman look". These cars retain all the features that have been familiar in Pullman stock for so long, with their straight sides, square-cornered windows and the slightly-domed ends of their roofs. And they have, of course, the inset end doors to the entrance vestibules, with deep oval windows in the doors themselves, and with rectangular windows in the vestibule ends.

The three Cars included in the Hornby-Dublo range are generally similar to one another in appearance, but there are detail differences as each represents a characteristic Pullman type. They are respectively a First Class Car, a Second Class Car and a Brake Second. The First Class Car, bearing the name *Aries*, represents the type of Pullman vehicle that incorporates a kitchen section at one end. This section is between the vestibule and the passenger saloon and is readily identified in the model by the fact that certain of the window openings in this section are smaller than those in the passenger section. Needless to say, the internal furnishing that is represented, even to the characteristic table lamps which can be seen through the window glazing, suggests the opulent style of first class Pullman travel.

Roof Details

Another indication of the presence of the kitchen section is the fact that the roof at this end of the vehicle is plentifully furnished with representations of torpedo-type ventilators. Other roof details include the circular projections representing the housings where the fans are installed in the real vehicle. In addition, the modelling on the moulded bodywork includes representations of the pipes leading up the ends of the vehicle to the roof where service tanks are situated in the real thing.

At the top of this page a 2–6–4 Tank emerges from the Hornby-Dublo Double Track Tunnel with a train of S.R. stock on a Two-Rail layout. The appearance of the Tunnel is most attractive.

The Second Class Pullman Car is not distinguished by name, but is simply designated *Car No. 74*, this being shown in the usual panel on the lower bodysides. In Pullman language it is a parlour car, well fitted to take care of the comfort of travellers by Hornby-Dublo Pullman services, as the cosy interior seen through the windows suggests. In the doors and the inner vestibule sections there are typical windows of oval shape, the actual passenger section having seven large rectangular windows in each side. The roof details on this car are plainer, in view of the generally simpler character of the vehicle compared with the First Class Pullman. Contrast in such details is all to the good, as one sees a lot of the roofs when looking at a miniature railway from the usual viewpoint.

The Brake Second Pullman Car carries the inscription *Car No. 79*, and makes a handsome vehicle to complete the train. It resembles No. 74, except that it has a guard's and luggage section at one end. The luggage doors, with handles and other fittings, are represented by finely-executed moulding. The raised guard's lookouts, of somewhat severe aspect, fit in well with the straight-sided character of the vehicle. With these fine cars available, Pullman services on Hornby-Dublo layouts can now be entered into and I hope to give you some ideas regarding their operation in our talks later on.

Another new vehicle in the luxury travel class is the Composite Sleeping Car, representing the B.R. Standard vehicle of this type familiar to all who travel by night. The real cars have five first class compartments, each with a sleeping berth, and six second class compartments. In general construction the model follows the lines of the Standard Corridor Coaches already dealt with in these pages and now familiar on many Hornby-Dublo railways. The bodysides are tinprinted and reproduce exactly the look of the real B.R. sleepers, carrying the standard emblem on the lower portions. The ends, the dummy gangway connections, underframe members and the well-detailed roof also are mouldings. The roof is complete with the air duct forming part of the ventilation system. Base and bogies are of metal, the bogies being of the new standard type I referred to recently in some detail.

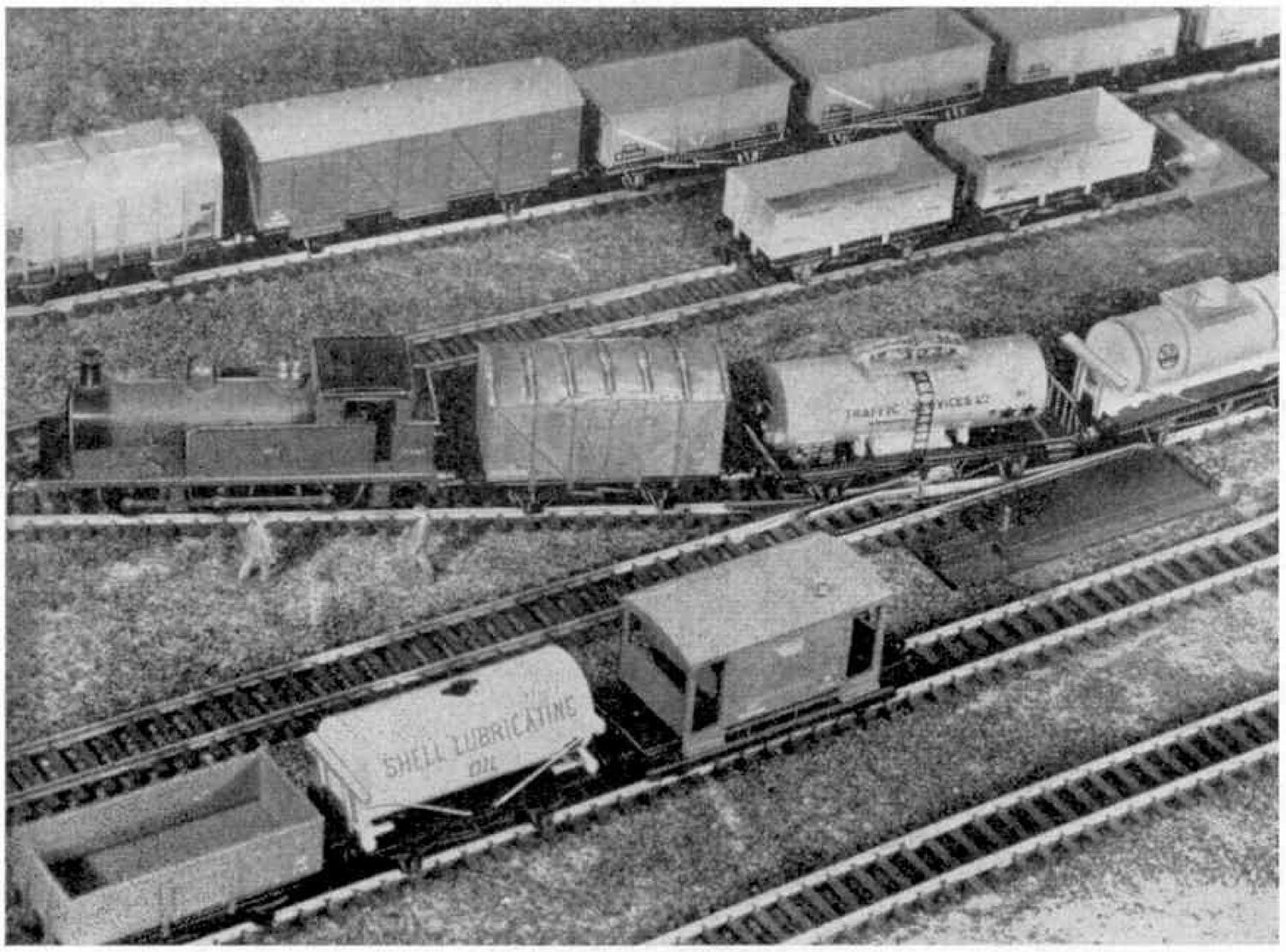
Reproduction of the interior is extremely well carried out by a one-piece moulding. The side corridor partition runs from end to end of the sleeping compartments and the first class and second class sections of the vehicle are divided from one another by a dummy door across the corridor.

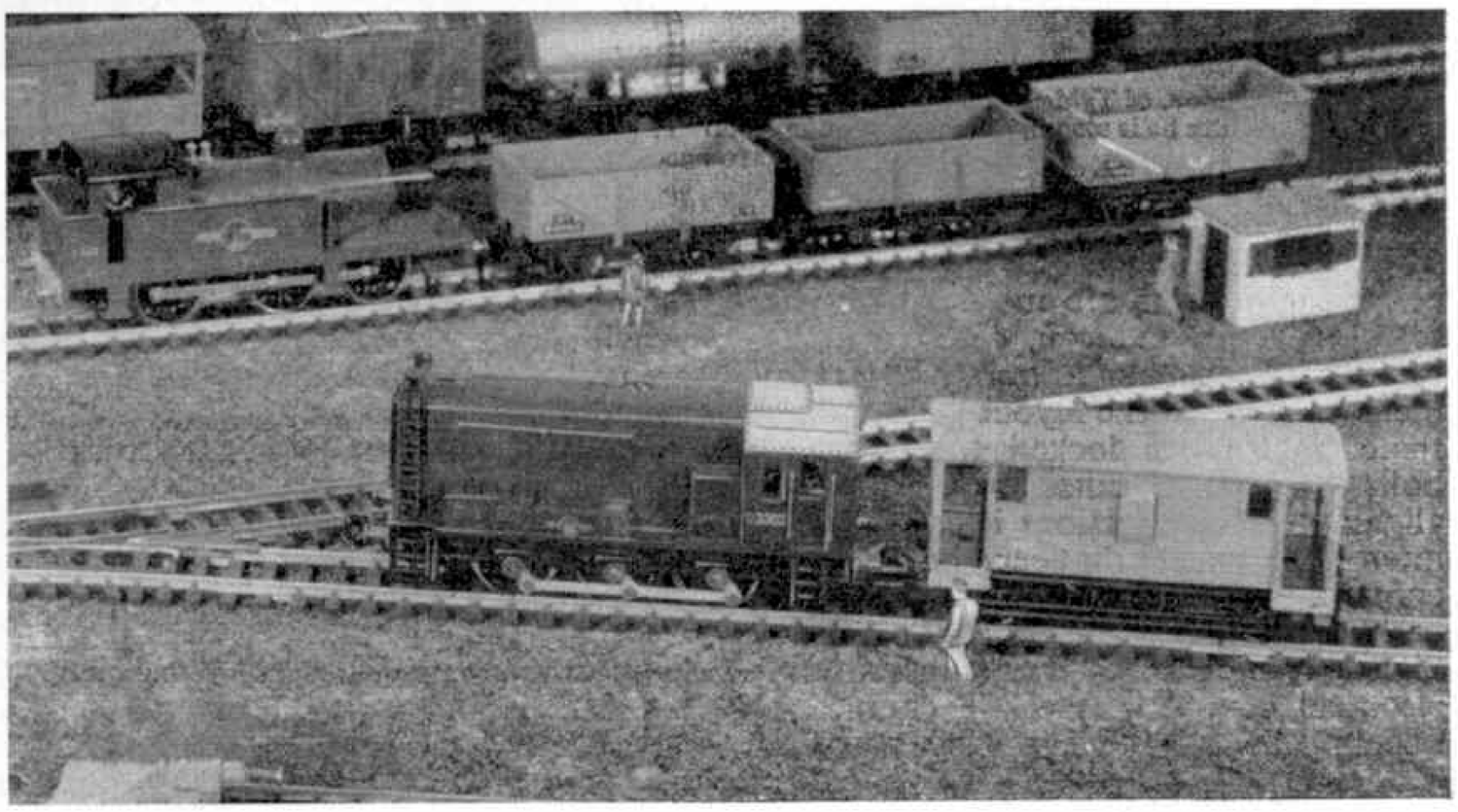
Even the Pillow

The individual compartments are modelled, each with a representation of the standard sleeping car berth, which is complete even to the reproduction of a pillow at one end. In the corner opposite the covered wash-basin and its cabinet is modelled. The attendant's compartment, from which come the welcome tea and biscuits served in the morning, includes the seat for the attendant, his crockery cupboard, a gas boiler and even the sink unit for the washing up.

Another coaching stock development of importance in Hornby-Dublo is the introduction of a Passenger Brake Van. This represents the B.R. Standard vehicle of this type, and is the first full-length brake van for passenger trains in the Hornby-Dublo System. It follows the general construction of the Standard Corridor Coaches, and the tinprinted design of the bodysides incorporates four sets of double doors, as well as the door for the guard. One door of each pair, and the guard's door, has a window opening, or "drop light" to use the coachbuilder's term, and there are various other window openings between the sets of doors. One of these intermediate windows has "frosted" glazing, as it represents the one in a real vehicle that comes opposite the rack for letters and similar packages in the guard's section.

The uses of such a vehicle are many. It can run at the front, or rear, of an express train, and it may appear on local trains as well. Trains of several such brakes can be made up for running parcels, and similar, services. It would not be out of place to run at least one of them in conjunction with the T.P.O. Mail Van. Clearly, there is plenty of work for the Hornby-Dublo Passenger Brake Van, and we must have further talks about this.



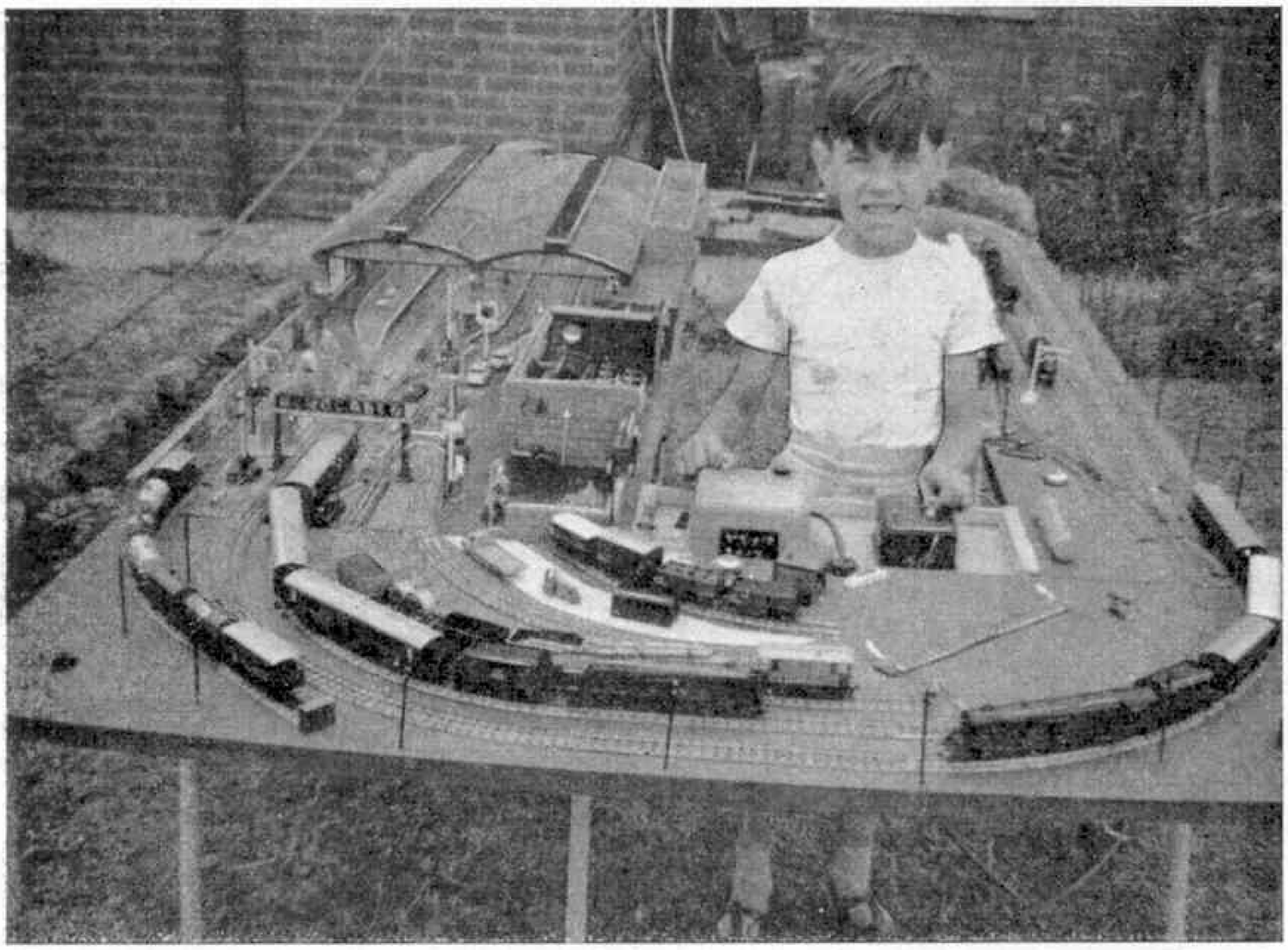


Above, freight movements are in progress, with the 0–6–0 Tank busy in the yard. (Right) The driver makes his way to the Hornby-Dublo Diesel-Electric Shunting Locomotive, which has already attached a Goods Brake Van for a local trip working.

BY LAYOUTMAN

3-RAIL SCHEME ON BOARDS

THE *Beverley Railway* might well be the title of the Hornby-Dublo three-rail layout shown in the pictures here, and in the diagram on the opposite page, for its operations are centred about a fine station of that name. The layout belongs to Robert Paul Bateson, of Tyldesley, Lancashire, who with the aid of his father, Mr. R. G. Bateson, has been able to build up a really effective system well suited to a variety of train operations.



Robert Paul Bateson, of Tyldesley, Lancashire is the enthusiastic owner of the Hornby-Dublo layout described here. In this picutre he is standing in the operating "well" enclosed by the sectional boards on which the layout is arranged.

The complete layout occupies a space of 9 feet by 4 feet 6 inches and the track and other components are mounted on four separate board sections, each well reinforced with timber framing and cross members. When the layout is assembled, these boards are locked together with bolts and wing nuts so that correct alignment of the sections is ensured. An interesting point is that each board is self-contained as far as the wiring for the various Electrically-Operated Points and Signals is concerned, so that there are no electrical connections to be coupled or uncoupled when the layout is put together or dismantled after use.

As you can see from the pictures there is an operating space, about 5 feet long, within the boards when they are assembled in position. The manner in which the individual boards have been arranged means that the time taken to assemble the layout ready for running, and to put it away again afterwards, is reduced to a minimum.

The main board section carries *Beverley* Station together with the interconnecting tracks at one end of the platforms, these being shown towards the top left hand corner in the diagram on the opposite page. The main line consists of up and down tracks throughout, these two tracks passing through the main platforms at *Beverley*, which are Nos. 3 and 4. Both facing and trailing crossover Points are provided within station limits, and these are useful in connection with any running-round operations that may have to be carried out for particular train movements. In addition, there are connections from the main line tracks to the terminal bays in the station, which serve respectively Nos. 1, 2 and 5 platforms.

The station is of home construction and I can well understand that a good many hours were occupied in its building, for it is complete with waiting rooms, parcels and luggage offices, bookstalls and various other features. Each platform has dummy stairway entrances by means of which access is gained to an imaginary "Underground". Views from each end of the station are included in the illustrations, that on this page showing the roof in place, while the other, with the roof removed, allows one to see all the different items that go toward the make-up of the station.

Entrance Hall

Over the station entrance from the road outside is a canopy and above this appears the bold title *British Railways*. The entrance hall has a gentle slope up from road level and the booking offices are situated on either side of this. The roof itself is arched, with orange coloured glazing, and when the station is fully illuminated for night operation it looks very attractive.

So much for the station itself. A feature of importance near the crossover Points previously referred to is the T.P.O. Line-side Apparatus, *Beverley* being a mail exchange point for trains travelling in the what is known as "up" direction.

To the right of Robert, as he stands in the picture here, is what is known as the Control Box, this being a building that houses a controller governing movements over the tracks serving platforms 1, 2 and 5, and all the sidings forming the station yard. In addition, it contains various switches governing the working of Electrically-Operated Points and Signals, and all the different electrical sections into which the layout is divided. It has not been possible to incorporate details of these sections in the diagram, but they could be arranged to meet the requirements of any enthusiast using the plan shown as his basis for his own layout.

Buffer Stop Sections

Each of the platform tracks just referred to incorporates a "buffer stop section", which means that an Isolating Rail is placed about one and a half rail lengths away from the actual Buffer Stop. The purpose of this is to allow an engine that has brought in a train to be held on the section that can be isolated while another engine approaches on the same track to take away the empty stock. Alternatively, these sections are useful in an emergency for bringing to a stop the locomotive of a train that has entered the platform at too high a speed. The effect of the isolating section, when switched out, is that the locomotive comes to rest before it actually touches the Buffer Stops and, therefore, derailments and other upsets are avoided. Uncoupling Rails, both Hand and Electrically-Operated, appear

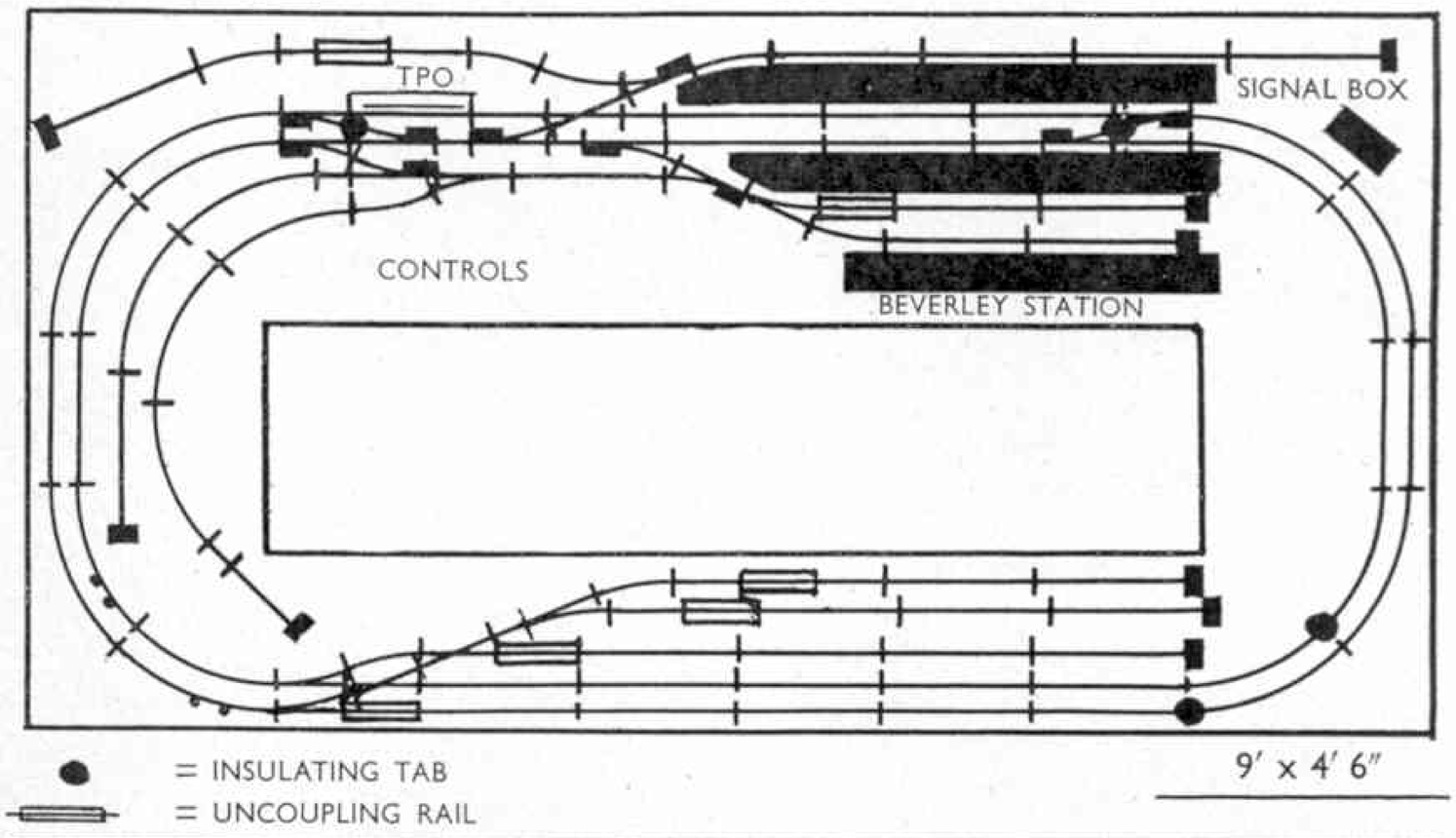
in various places and the location of these will be clear from the diagram. Certain Points and Semaphore Signals are wired to operate in conjunction with one another and this is a feature that is particularly useful to a busy operator on almost any layout, for the semaphore arms then indicate the way in which the Points are set.

On the inner side of the down main line, almost opposite the spot where the T.P.O. Lineside Apparatus is situated, a set of Points leads to a couple of sidings. These siding roads are kept busy with movements between them and the station tracks extending in the opposite direction.

Use of Uncoupling Rails

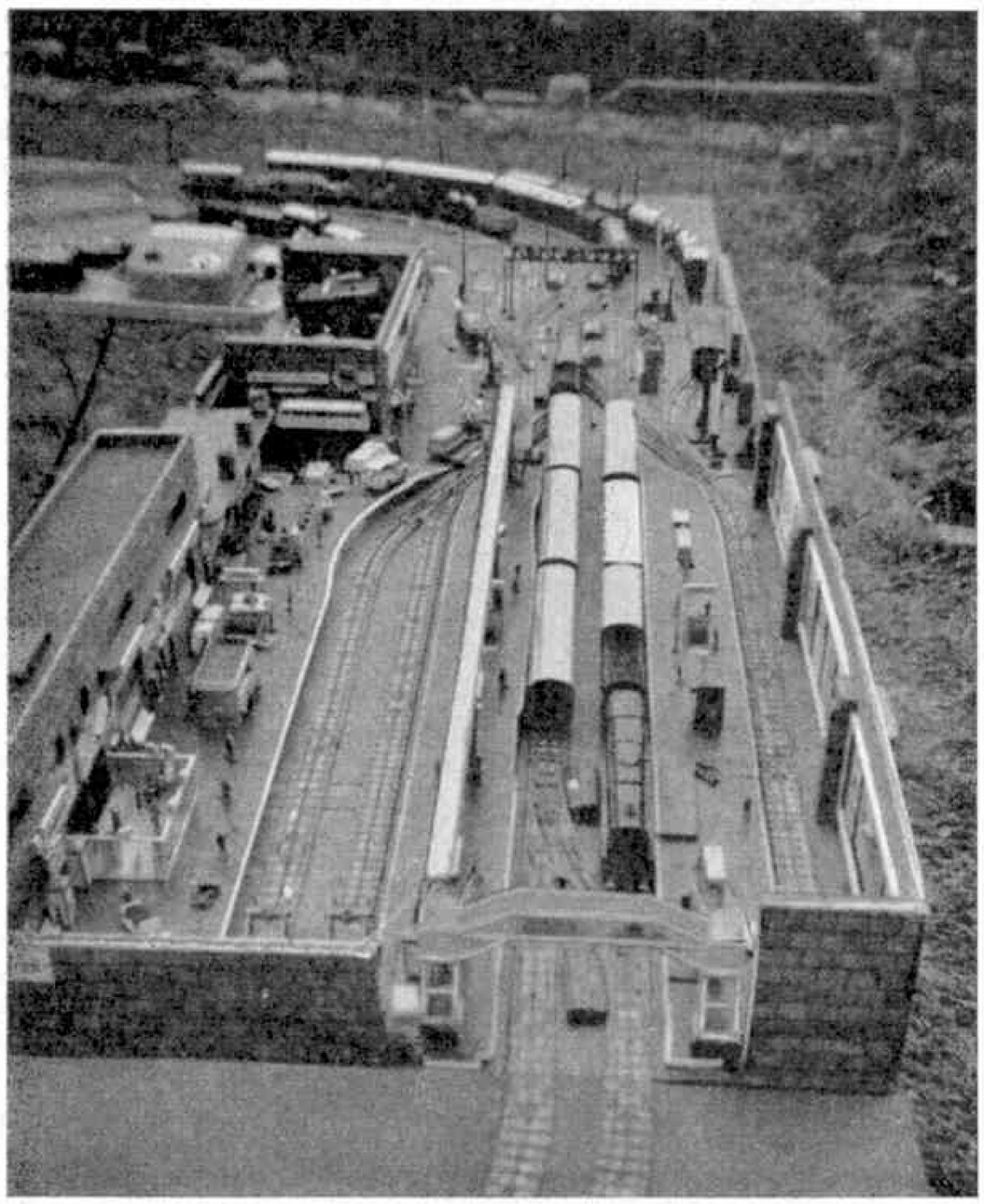
An even more extensive siding layout alongside the main line is clearly shown in the lower half of the diagram. Each of the three siding tracks here includes an Uncoupling Rail, and there is another of these useful items near the Points leading to the sidings from the up main line. The situation of this Uncoupling Rail makes it possible for the locomotive of an up freight to detach the brake van and then to move forward, clear of the Points, before making a reverse movement, pushing the wagons into one or other of the two sidings which are reached from the outer or up track.

Movements in and out of the remaining siding, which is connected to the inner main line, involve some running round to be carried out by means of the crossover Points near the station. Such movements are required quite frequently in miniature railway practice, owing to the various restrictions with which operators are too familiar. Similar operations are not unknown, however, in actual practice, so there is every justification for them in miniature railway conditions.



Here is the diagram of Robert Bateson's layout. Rails required are as follows:

12 Curved Rails 3710.
7 Curved Rails Large Radius 3719.
1 Curved Terminal Rail 3713.
1 Curved Terminal Rail Large Radius 3720.
8 Curved Half Rails 3711.
9 Straight Rails 3701.
1 T.P.O. Rail.
7 Straight Half Rails 3702.
8 Straight Quarter Rails 3703.
6 Uncoupling Rails 3705.
3 Diamond Crossings Left-Hand 3735.
4 Isolating Switch Points Left-Hand 3729.
1 Isolating Switch Point Right-Hand 3728.
4 Electrically Operated Points Left-Hand 3732.
6 Electrically Operated Points Right-Hand 3731.
7 Switches 1614.
9 Buffer Stops D1.
4 Insulating Tabs IT.



A view of "Beverley" Station. The roof has been removed so that the interior details are readily visible.

As the photographs show, little has been done so far in the way of providing lineside scenery, although there is a fairly deep cutting in one corner of the lay-out. This is not shown on our diagram, but it can be seen in the illustration on the opposite page where it appears just above Robert's left shoulder. A special point has been made of fixing telegraph poles at fairly regular intervals alongside the open stretches of main line, and these have proved useful in one or two instances when derailments have occurred and stock has been in danger of falling off the baseboard. The presence of these poles alongside the fine stretch of straight main line that is available past the sidings, where speeds may be high, is a very sensible precaution quite apart from the spectacular and realistic effect of the poles.

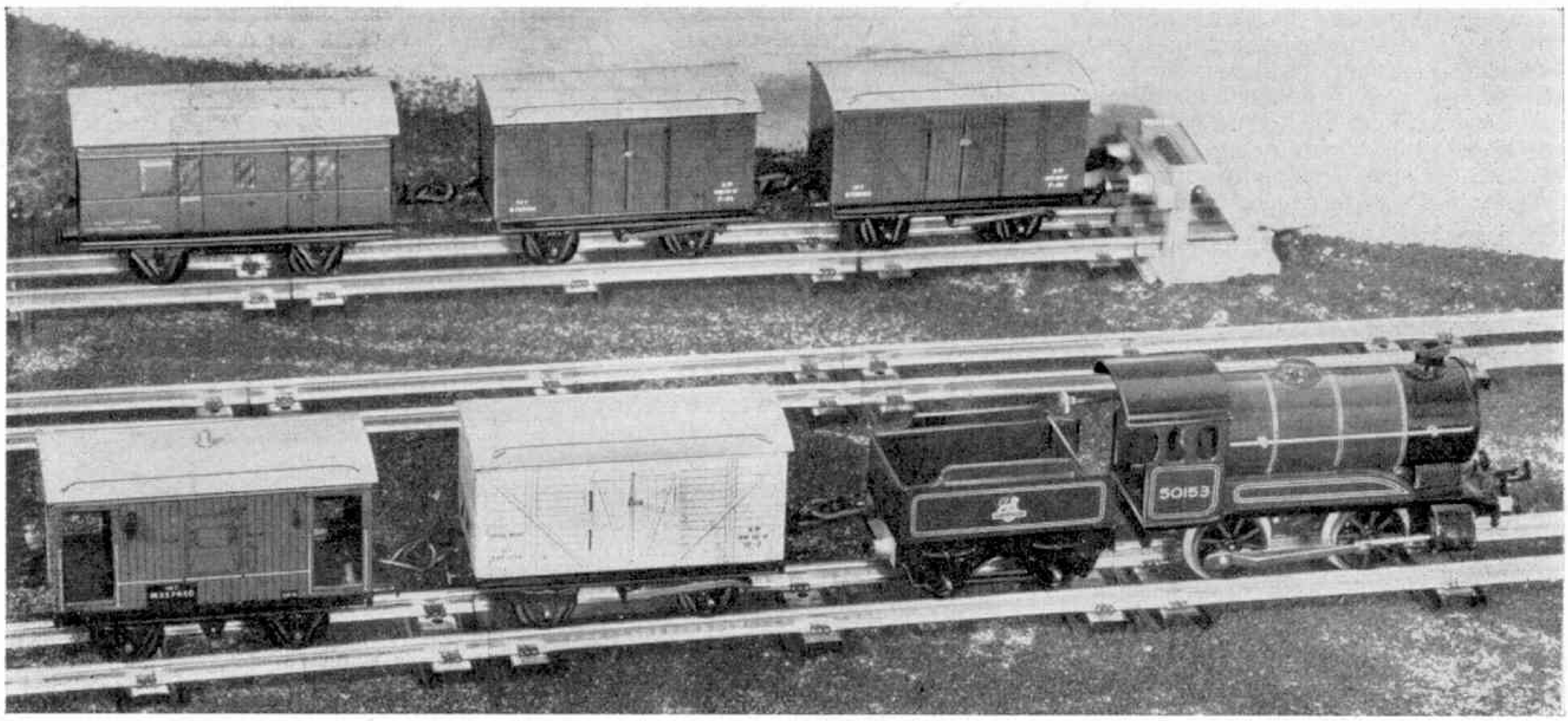
Express Services

There are eleven Coaches and 22 goods vehicles in use. The express passenger Locomotives include one *Duchess of Montrose* engine and one of the earlier *Duchess of Atholl* 4–6–2s, these two sharing the working of a miniature *Royal Scot* service provided by a train of Hornby-Dublo D22 Corridor Coaches in maroon livery. Another working in which they take part is the running of a mail train consisting of the T.P.O. Mail Van, a long-wheelbase Van and a brake-third vehicle of ex-L.N.E.R. type not now included in the Hornby-Dublo System.

In addition, as such things are readily possible in miniature, a train representing *The Flying Scotsman*, the rival service to *The Royal Scot*, is also run, the regular engine for this being one of the older Hornby-Dublo streamlined 4–6–2s, *Sir Nigel Gresley*.

Three Tank Locomotives

There are three tank locomotives, two of the 2–6–4 type and one 0–6–2. The latter spends most of its time on shunting and marshalling duties. The 2–6–4 Tanks are used for local trains of non-corridor stock and they appear also on fast freights. It is possible to have all the Locomotives moving at one time on various tracks, but for convenience in working two engines is the most that can be handled comfortably by one operator.



"TOMMY DODD" TALKS ABOUT:

A ONE-VAN SPECIAL

TO add to their railway is something all Hornby Gauge 0 train owners wish to do and often the first step is to add more rails to the simple beginner's layout, so that the system is made longer and, maybe, wider. Then, perhaps, a Point, allowing a siding to be formed, is obtained and in the siding can stand any coaches or wagons, and so on, that are not actually running in the train on the main line. After that an additional coach, or a wagon or two may be obtained and so on.

Most Hornby railway owners like a little variety in coaches or wagons, and so one or two of any type are likely to be added to the original Train Set. There may not be room for more just at that time through space restrictions, which mean that sidings are usually limited in length. This does not affect passenger trains so much as goods, because passenger trains usually consist of a smaller number of vehicles. So, goods trains for one kind of traffic only are unlikely to be run, but formations of several vehicles of the same general character are frequently made up, especially for fast freight services which form an important part of the programme on many a clockwork system.

Those who are keen on variety in operation can readily and quite reasonably arrange a special train now and again, much like that shown in the picture above. This consists of just one van—in this case the No. 50 Refrigerator Van—and of course a Goods Brake Van as well, being hustled along by a Hornby No. 50 Locomotive. There must, of course, be reasons for this sort of thing, which can happen in real practice, and I am sure most of you who have seen such short special train formations at one time or another must have wondered just why they are run. Perhaps, as in our case, there is a consignment of very urgent traffic; or possibly a refrigerator van is specially needed further down the line for a waiting load. In either case the van must be moved and moved quickly too and this is just what the Hornby engine is doing.

Our little special could quite easily have consisted of a No. 50 Cattle Truck, or a No. 50 Low-Sided Wagon with Container, or a Goods Van, according to the particular purpose for which the train is run. There are two of these Goods Vans shown in the picture, in the siding beyond the main line, and with them is a No. 41 Passenger Brake Van. The latter is a very useful item, suitable for many other jobs apart from that for which it was originally intended. In addition to forming the end vehicle of a passenger train, it could be used quite reasonably on an important fast freight and quite possibly that is what the Van shown in the picture will be doing the next time it is used. It could also be used in the formation of a train for parcels and other traffic of a similar nature. This applies to the No. 51 Passenger Brake Van as well, which represents the corridor type of vehicle of this kind.

Whichever of these two Passenger Brake Vans is used as the last vehicle on a train, it must carry a red tail lamp, showing that the train is complete. Where the Goods Brake Van is used the lamp display becomes more exciting, because in addition to the tail lamp, two side lamps should be carried as well. Two of these lamps, and a tail lamp, are provided with the Hornby No. 50 Goods Brake Van when you buy it. If any of the lamps get lost, for they are comparatively small and this may happen, they can be replaced because spares are available and in fact they are listed among the sundries in the Hornby Gauge 0 trains folder.

A brake van is required at the tail of a train, even a one-van special, if it is moving over tracks carrying passenger traffic as well. But on purely goods lines, such as may exist between one yard and another at a big traffic centre, the brake van may be dispensed with and a tail lamp would then be carried at the rear of the van or wagon itself. All Hornby No. 50 Vans are in fact fitted with lamp brackets, so that this practice can be correctly followed.

The fact that the lamps are removable adds considerably to the fun of train working and this applies particularly to the corresponding headlamps that can be carried on the front and rear of the Hornby No. 40 Tank and the Nos. 50/51 Locomotives. Exactly what the lamps mean in their different positions will be found on page 12 of your H.R.C. Booklet.

WITH THE SECRETARY

Club and Branch News

Winding Up The Session

MARCH 31 brings to a close the current session in Clubs and Branches, and—in terms of the calendar—marks the end of another indoor model-building season. Such is our fickle weather, however, that often indoor activities are continued well into the Spring, and even the Summer.

Just as the first Winter session generally concludes with a Christmas party, so the second session is usually wound up with a Grand Finale. This often takes the form of an Open Night to which members' parents are invited and at which prizes are awarded for consistently good model-building during the Winter, or the Club year. In some Clubs points are awarded at model-building meetings, and the first prize-winner is the member who has accumulated the highest total of points. The first prize may be a modest monetary gift or, as is more usual, the presentation of a shield or cup which the winner retains for a year and then hands back to the Club to be used again.

The flourishing Christchurch Meccano Club, in far-off New Zealand, has followed this practice for many years, and several Clubs in Great Britain adopt a similar plan.

CLUB NOTES

NORTH END (PORTSMOUTH) M.C.—The Managing Director of a furnishing company located near the Club room has kindly promised to present a cupboard in which to store the Club's stock of Meccano parts. Mr. Enfield's model railway layout, which was the highlight of the joint Club and Branch display at the Co-operative Toy Fair last December, has been re-assembled in the Club room for use at meetings. *Secretary:* Mr. A. J. Nicholson, 213 Sultan Road, Buckland, Portsmouth.

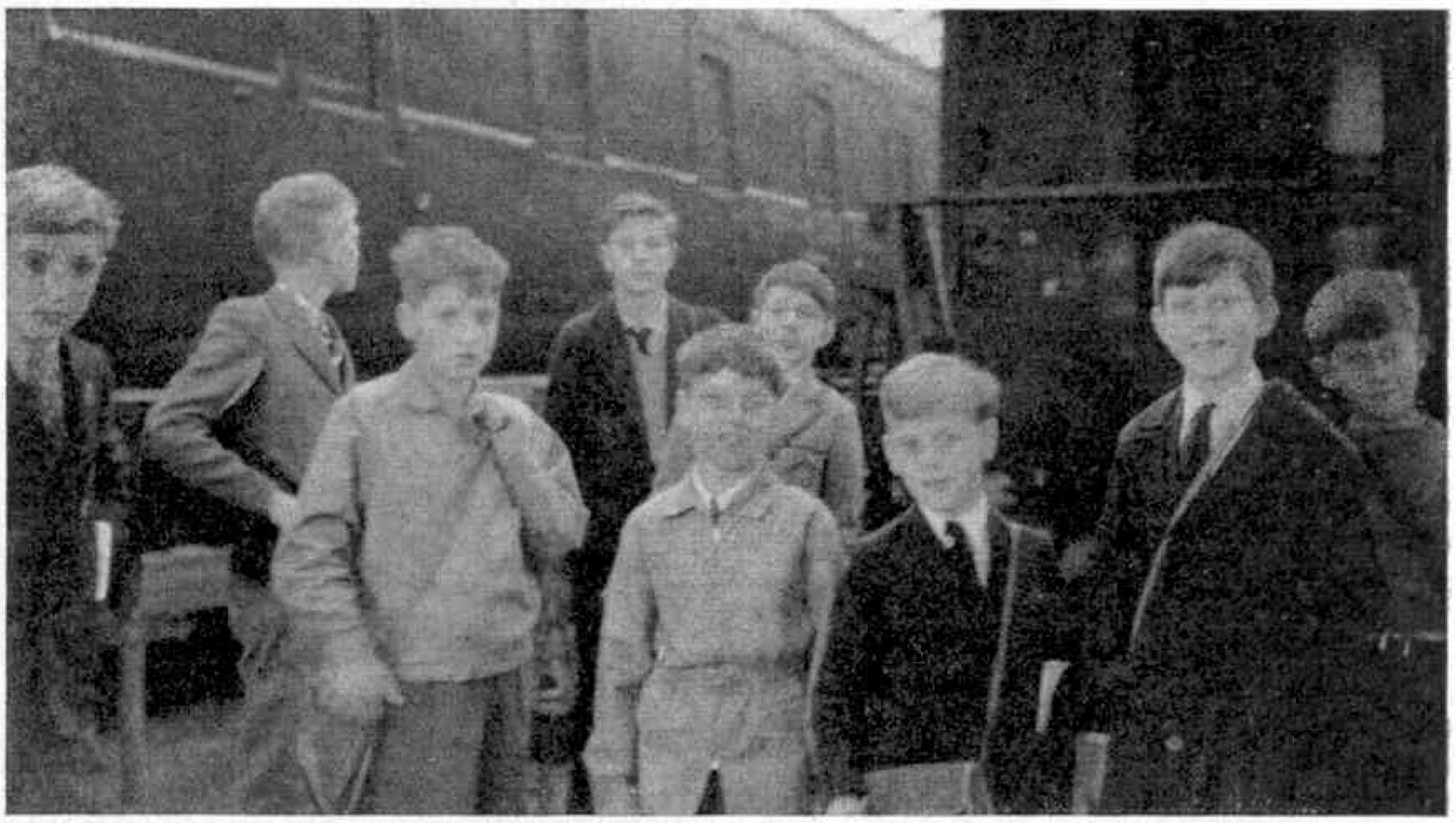
BORDEN GRAMMAR SCHOOL (SITTINGBOURNE) M.C.—A diversion from Club model-building activities was a recent film show, when two aviation films entitled *The Power to Fly* and *The History of the Helicopter* were shown. *Secretary:* C. Walker, 5 Woodstock Road, Sittingbourne, Kent.

NIGERIA

GINDIRI BOYS' SCHOOL M.C.—Club activities have been curtailed as members have been busy with school examinations. Next term, there will be an influx of new junior members. *Leader:* Mr. P. F. Bradford, Sudan United Mission, Gindiri, P.O. Barakin Ladi, Via Jos, N. Region, Nigeria.

SOUTH AFRICA

CAPE PENINSULA M.C.—Mr. F. Korck and Mr. Z. A. de Beer, who have been Chairman and Leader respectively of this Club for many years retired recently, and have been succeeded by Mr. N. Boyd and Mr. Colin Cohen respectively. The Club's display at the annual Hobbies Fair was a great success, and resulted in several new members being enrolled. Some excellent private models were exhibited along with the Club group models. The group competition models were judged at the Fair, and T. Venn's fine compact mobile crane won the prize. A provisional programme for 1961 has been drawn up, and it is planned to include visits to Cape Town's most modern telephone exchange, the printing works of the *Cape Times* and to the Royal Observatory. *Secretary:* Antony Ritchie, "Eldoret", Crescent Road, Kenilworth, Cape Town, South Africa.



Some of the members of the Ashtead Free Church M.C., Ashtead, Surrey, pose for the Club photographer during a visit to the B.R. Lancing Carriage and Wagon Works, Southern Region, last year.

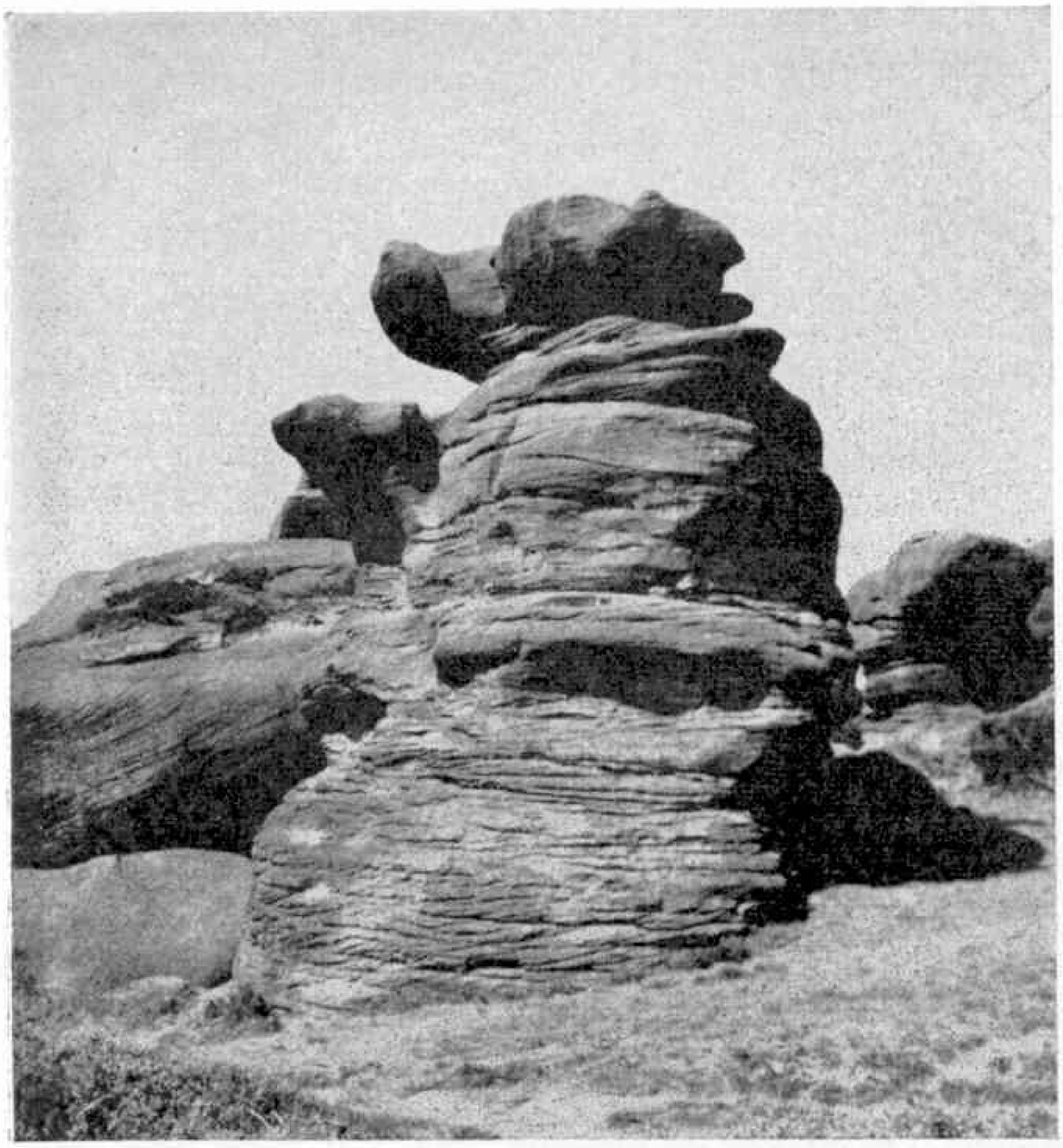
BRANCH NEWS

KIDDERMINSTER MODEL RAILWAY CLUB—The Club has moved to new premises at 44a Neville Avenue, Kidderminster, and senior members have been enthusiastically working hard preparing the rooms for occupation. An extensive electric model railway layout is being constructed, and by the time this report appears in print the new Club rooms will be in regular use. The Clockwork Railway section, which has more than held its own among the junior members, is remaining at St. Andrew's Church Hall, South Street, where meetings are held at 7 p.m. on Thursday evenings. It is expected that the functioning of the Club in two separate sections will lead to friendly rivalry, and be bound to have good results. Members are looking forward to the annual Club outing to London during the Easter recess, and the itinerary this year will include a visit to London Airport. *Secretary:* Donald Davies, 34a Woodfield Crescent, Kidderminster, Worcs.

AVIARY MODEL RAILWAY CLUB (LEEDS)—After a very successful annual Christmas party, during which games were played and prizes were presented in some of them, members have settled down to the less exciting but very interesting fortnightly meetings of the current session. The Gauge 00 track has been rearranged to avoid a corner which had proved awkward to clean, and track required to complete the fourth circuit has been bought. The Club artist has been busy painting new background scenes for both this and the Gauge 0 layout, and the latter has been further improved by the addition of road pavements and several other small models. At one meeting a discussion on *Corporal Punishment* produced some strong views—as you might expect! *Secretary:* John Baker, 10 Salisbury Terrace, Leeds 12.

THE STRANGE STONES OF BRIMHAM

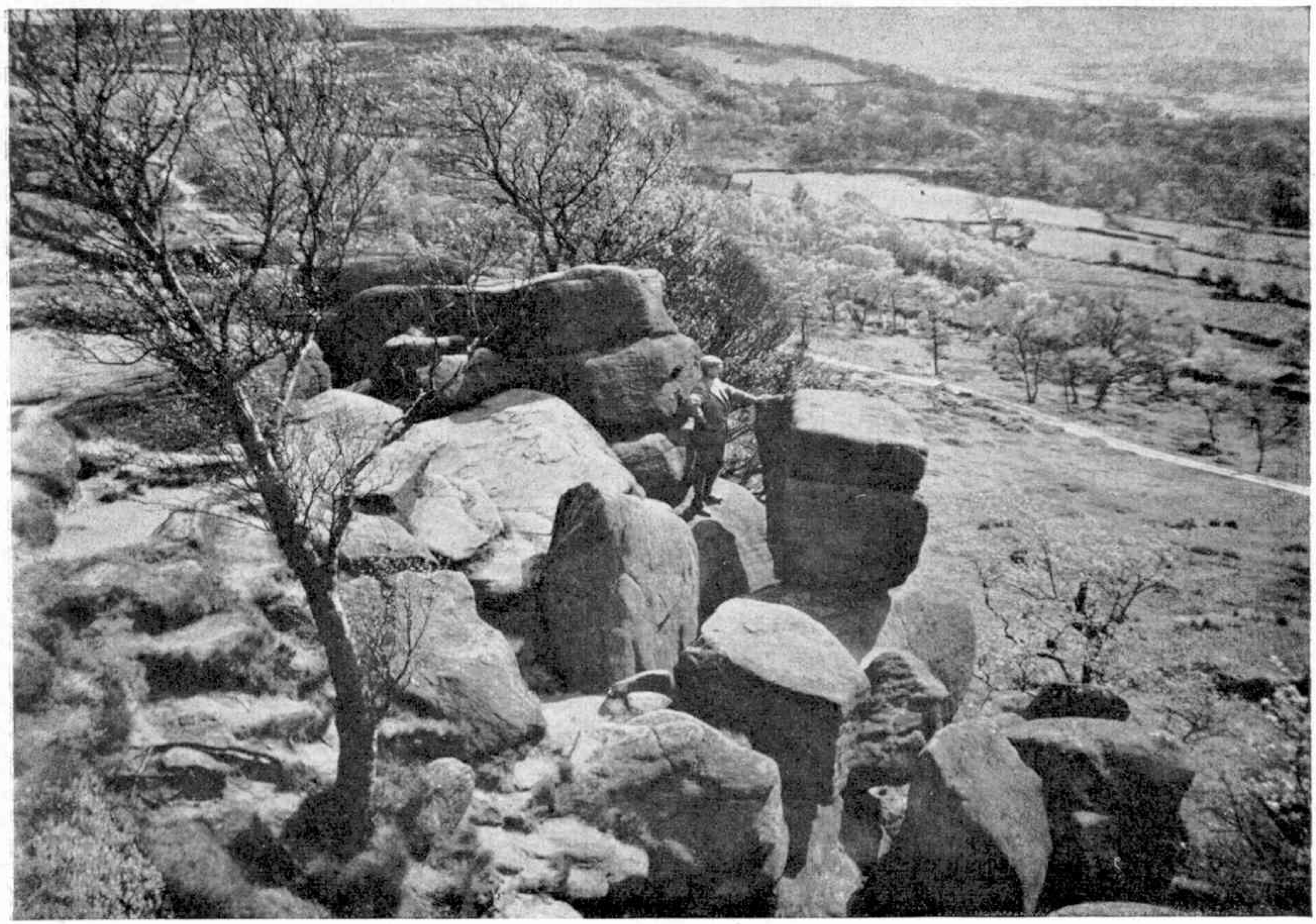
By J. R. Ellison



More than 30 feet high the "Dancing Bear" (left) is one of the distinctive rocks to be found at Brimham. Below: In this panoramic view the warden at Brimham rests his hand on a 26-ton rocking stone.

HOW would you like to clamber aboard the broad back of a 50-ton whale, make the acquaintance of a dancing bear more than thirty feet tall, or scale the steep sides of a colossal dinosaur?

Incredible as it may seem, there is a place where all these fascinating things can be done, and—the odd bruise or scrape apart, perhaps—in complete safety! Of course, there's a catch: the "creatures" I have mentioned, and many more besides, are not flesh and blood but gigantic stone relics of a bye-gone age. All the same, there is a great thrill to be had getting to know them.



The place where whale, bear, dinosaur, and their host of intriguing companions may be found is known as Brimham Rocks, a plateau some sixty acres in area, set among the beautiful moorlands of Yorkshire. This miniature Lost World, which has scarcely changed in thousands of years, is situated between the pretty little village of Pateley Bridge and the ancient miniature city of Ripon. The latter, incidentally, boasts an unusual Cathedral, whose crypt goes back to the very beginnings of Christianity in England, and a hornblower—employed by the City Fathers—who takes his stand in the Market Square each night at nine o'clock, and sounds a few mournful notes to signify that all is well.

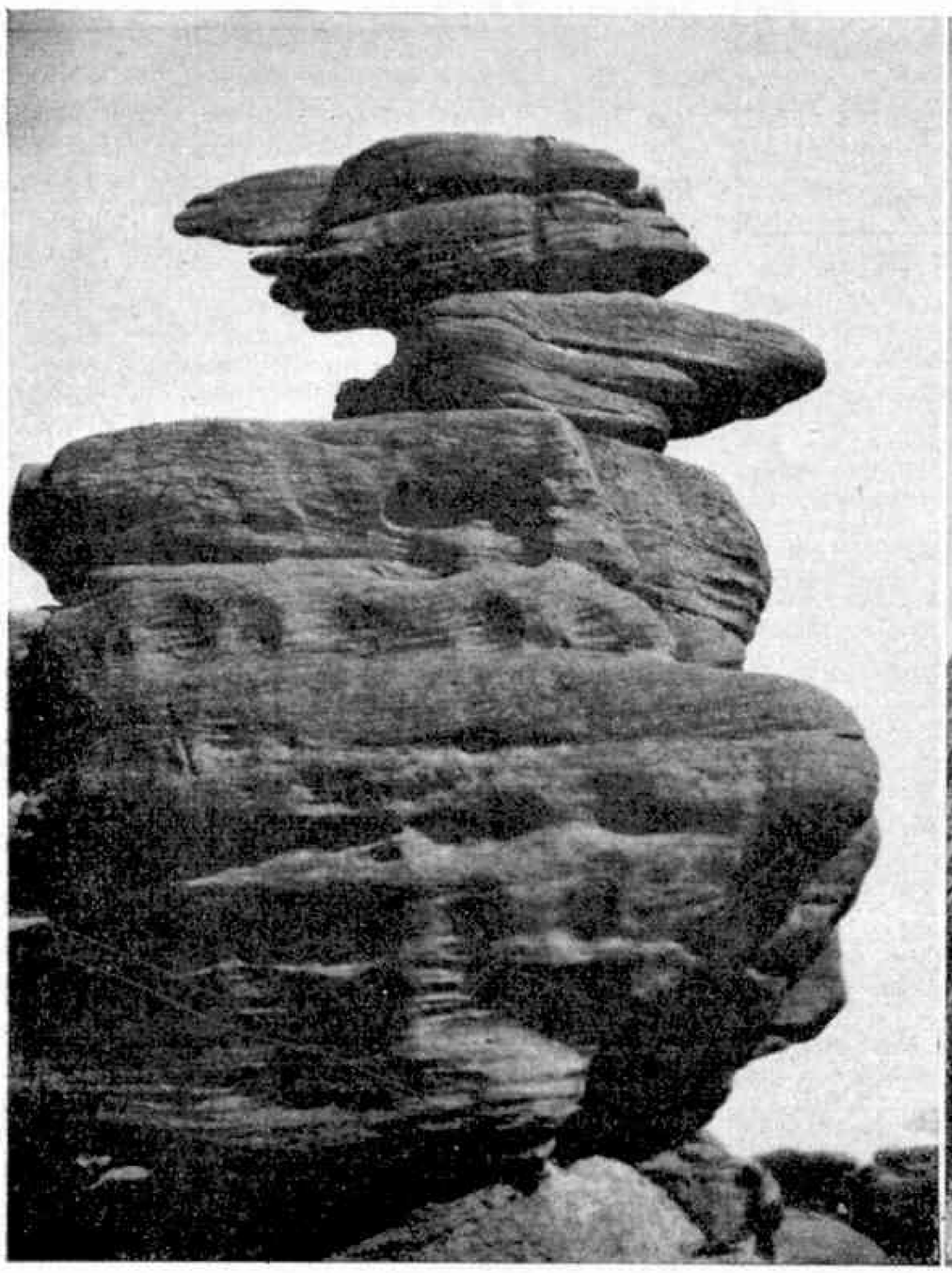
It was from Ripon that I first set out to visit Brimham. Following the directions of an inhabitant who looked almost as antiquated as his surroundings, I took the rolling, winding road which passes the vast Studley Royal Estate, with its magnificent trees, and freely-roaming herds of deer. If time had permitted, I would have turned aside to explore the ruins of Fountains Abbey which lie within its boundaries. Quite apart from the beauty of the ancient buildings, I should like to have seen the place where, according to monastic records, a Space Ship landed in the Middle Ages; but I had set out with the intention of exploring Brimham, and I resisted the temptation to turn aside. In due course, ten miles or so beyond Ripon, I reached a signpost which indicated that my goal was near. With mounting excitement, I followed the rough, winding track which it indicated. Half an hour later I was striding for the first time across the bracken and bilberry-clad slopes of Brimham.

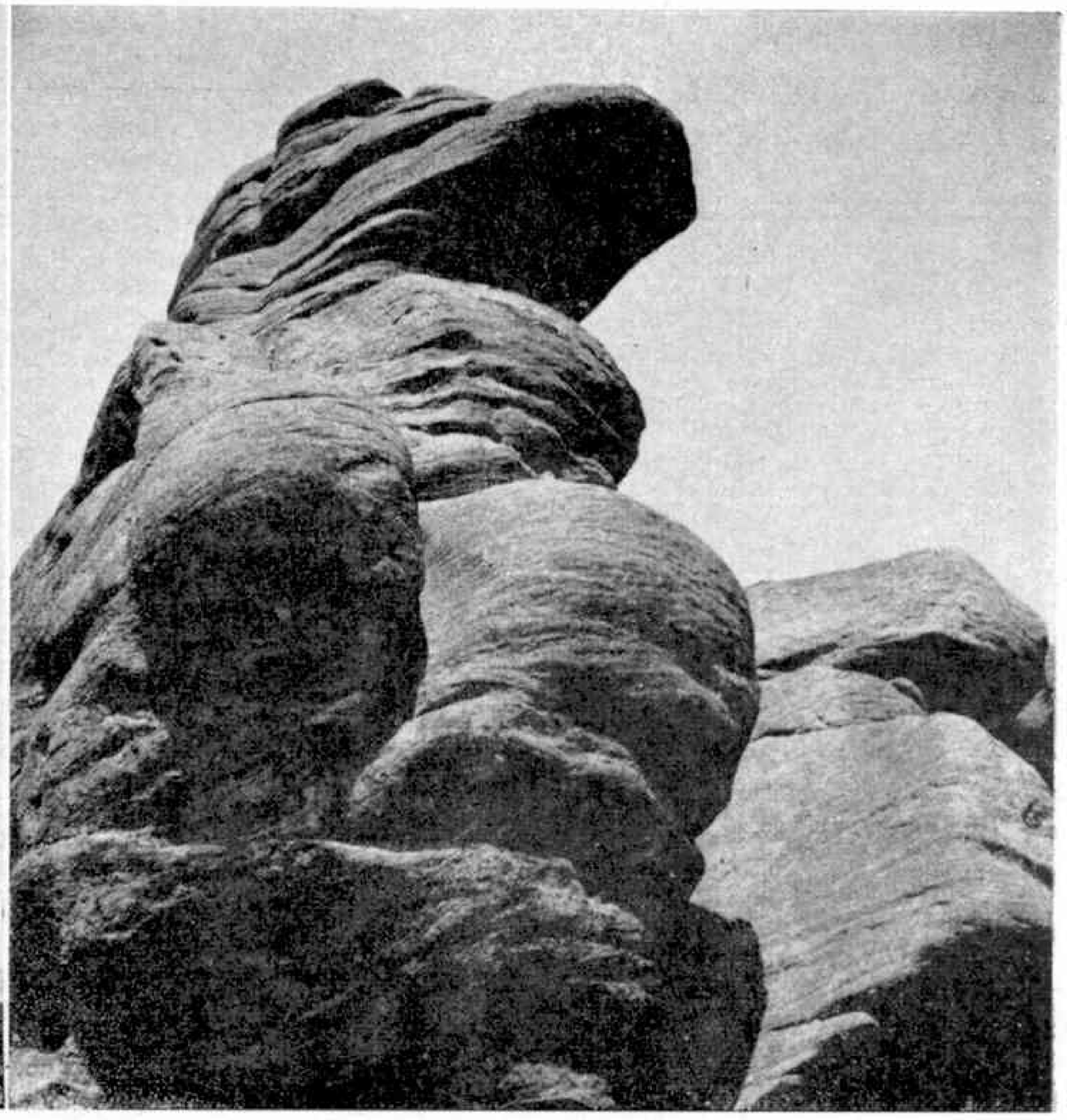
It proved to be a memorable moment. The sky had begun to darken with the threat of an impending storm. Strange, and somewhat sinister in the half-light, the massive rocks stood silhouetted against the sickly yellow glow of the distant horizon. Alone, for the more sensible visitors had already left for home, I wandered about in what seemed to be a prehistoric parade. Here, a gigantic dinosaur reared against the sky; beyond, an enormous gorilla's head confronted me. I noted a turtle and a whale, a bear and a hippopotamus. Indeed, so real did some of the creatures appear that it would not have surprised me in the least had a living leathery pterodactyl come flapping out of one of the numerous caverns, or a real brontosaurous begun to plod laboriously across the plain below! It was a strange, and very thrilling, experience.

Since then, I have learned a little of the history of the Strange Stones. Their probable origin is described in a nineteenth-century, "Guide to Ripon and District" as follows: "The rocks on the ridge at Brimham owe their forms almost entirely to the action of the sea during the Glacial Period. At that time, Brimham probably stood out as a little island, with its cliff facing west. Frost and rain have, indeed, subsequently modified their shapes, but the effect of these elements may well have been very slight. The rocks—which are composed of grey, millstone grit—are in much the same condition today as they were when the Glacial Sea finally left them."

The century or so which has passed since those words were written has brought no appreciable change to Brimham. Apart from vandals who have carved their initials in the stone, man has had the grace to leave untouched these amazing symbols of nature's skill as a sculptor. The result is that curious resemblances which resulted, long ago, in the naming of conspicuous individual stones, are as striking today as ever. The amiable "Dancing Bear", weighing several hundred tons, still delights the multitudes of visitors who pay their shillings (boys, even quite large ones, sixpence!) to stare and marvel. The "Sphinx"—so astonishingly like its Egyptian counterpart that one expects to see palms and camels—astounds all who see it. So do the enormous "Rocking Stones", prodigious, freak boulders which are so delicately poised that the merest touch serves to move them. These latter, particularly, conjure up visions of Druids, strange rites, and grim ordeals. Such things belong, happily, to the past. But the Strange Stones of Brimham are both a fascinating reminder of them and a priceless heritage.

Big Chief Stony Face? The Indian chief (below left) is another of the intriguing stone figures at the Yorkshire beauty spot described in this article. (Right) A Dinosaur looks out over the rolling moorlands.





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FOR OTHER STAMP ADVERTISEMENTS SEE ALSO PAGE 106

For Stamp Enthusiasts

The Big Rock

By F. E. Metcalfe

AS one who has been to Spain many times I have learned that its inhabitants are about the most tolerant people there are. I have also learned (you see I happen to speak Spanish, and thus get into plenty of conversations with the natives) to avoid one subject and that is Gibraltar, the "Big Rock" that sticks out, like a sore thumb (to Spaniards) into the Mediterranean, and is our philatelic subject this month.

I have chosen this much-disputed British colony for discussion because all its postal issues are not only very popular with Commonwealth collectors, but also, by reason of it being part of Europe—irrespective of who is in actual possession—with philatelists on the Continent itself. This means a big percentage of the world's collectors, because Europe is where so many of them are. Another reason for choosing Gibraltar is that as recently as October 29 last year an entirely new set of stamps was issued. This set, whatever the critics may say (and they have been saying plenty, not all of it entirely complimentary), is proving very popular with thematic collectors all over the world, as well as with those who go in only for "QE" stamps.

As I will try to show, this new set features some most interesting subjects among its designs. First, however, I would like to run over Gibraltar's philatelic history, because there must be quite a few *M.M.* readers who have bought some of the values of the new set, and are likely to be interested in earlier issues, particularly those issued during the reign of King George VI. These latter stamps are of particular interest, with some very scarce perforation varieties, and are well worth examination. I shall have a little hard-luck story to tell about one of them before I end my notes.

Gibraltar started off, in January 1886, by issuing seven stamps which had been printed for use in Bermuda but were overprinted Gibraltar for the purpose. A strange start, indeed. These stamps had only a short life, being merely a stop-gap, and in December of that year Gibraltar had the first issue of its own stamps. The designs were very similar to those previously overprinted, but they *did* bear the title of the issuing country. Incidentally, until then the stamps had featured British currency, from a halfpenny to a shilling.

But two and a half years later there was a further overprinting, or perhaps you would call it surcharging, for Spanish currency was introduced: and the ½d. stamp was overprinted 5 centimos and other values correspondingly up to 75 centimos on the 1/–. These stamps, too, had a very short run, as four months later—November 1889—saw the appearance of Gibraltar's own stamps in Spanish currency But, to continue this strange story, nine years later stamps of the same design were issued, although this time there was a reversion to British currency, and right up to the present day pounds, shillings and pence have prevailed, irrespective of changes of design, and probably will as long as we hold the "Big Rock".

Following these 1898 stamps came others bearing first the head of King Edward VII, and later of King George V. I am afraid that all these stamps were of the rather dull head type. Timidly, by today's standard, three pictorial stamps were issued between 1931 and 1933 featuring "The Rock", all with the portrait of King George V. With the exception of the ½d. and £1 values all stamps which followed have been pictorials. This brings me to the KGVI period. These stamps appeared in 1938, and during World War II there were various printings, several of which showed different perforation, and are scarce.

The one to look for is the 2d. value perforated 13½, and this is where my hard-luck story comes in. I heard of the existence of this stamp just after it appeared, and felt that it must belong to a coil, so I sent for one; at the same time I mentioned—not being certain that it *was*

a coil—that I wanted stamps with the watermark sideways (which is what the stamps I was after possessed). In due course sheets of the stamp arrived. Yes, the watermark was sideways, and I felt I had landed a very big fish. But shortly after that a new printing appeared, with the watermark so, and then it was too late to send again for a coil. Today, stamps from coils (being of a different perforation) bring about £20 each. I might have had 480 of them if I had not said that, although I wanted a coil, sheets would do if the watermark was sideways.

And now I must come to the new set which is still so much in the news. I am afraid that one complete goes up to £1, but never mind, we can get some very striking stamps if we only take up to 1/– value. There will be eleven stamps, and designs include:– ½d. Gibraltar Candytuft; 1d. Moorish Castle; 2d. St. George's Hall; 2½d. The Keys of Gibraltar; 3d. Gibraltar's Airstrip (yes, it's big enough for that!); 4d. Catalan Bay; 6d. The Rock itself; 7d. Airport Terminal Building; 9d. American War Memorial; 1/–. The Famous Rock Apes. For readers who can afford to go higher these are the other subjects depicted: 2/–. Barbary Partridge; 5/–. Blue Rock Thrush; 10/– The Rock Lily (*Narcissus Niveus*); £1 Silhouette of the Rock, and badge of the Gibraltar Regiment. Of course, all the stamps bear a portrait of the Queen (after the artist Annigoni) and insets of various subjects with Gibraltar connections.

All the stamps except the £1 one, which is "recess", are printed by the photogravure process. I think the designs would have been improved if the insets containing the principal designs had been larger, but no one will deny the colourfulness of the stamps. As for thematic collectors, they are finding at least a dozen themes illustrated.

I don't suppose many readers will want to go right back to the beginning, but if you are interested in Gibraltar stamps you could start with the first KGVI stamps of 1938—and look out for the perforation varieties. You never know what you might pick up. (*Continued on page 110*)

Stamp Gossip

SUPPLY AND DEMAND

AS you might expect, I am often asked about a stamp, or stamps, and while the owner wants an opinion on the value (which I cannot give) it is always felt that because the stamps are old they must be good. Well, I have to reply that age has very little to do with value; it is solely a question of supply and demand. For instance, the "Penny Black" is a comparatively common stamp—one collection which was sold some time ago contained 90,000 copies; enough in some cases, where

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FOR OTHER STAMP ADVERTISEMENTS SEE ALSO PAGE 104

NEW VESSELS FOR FERRY SERVICE

The steam ferries *Rose II*, *Catherine II* and *Edith II*, built in 1901, 1903 and 1911 respectively, which maintain the Tilbury–Gravesend passenger ferry service of British Railways, Eastern Region, are being replaced by three new vessels developed and built specially for this service.

The preliminary design was prepared by the Shipping and International Services Department, British Transport Commission, in conjunction with the Continental Traffic and Shipping Manager, Eastern Region.

These new vessels, built by Whites Shipyard (Southampton) Ltd., of Itchen (Hants.), are of steel construction. They will be 110 feet long and will have a speed of nine knots. Gross tonnage in each case is 213.74 tons and each boat will be able to accommodate 475 passengers, with a crew of four.

Each vessel is fitted with a 6-cylinder Lister Blackstone uni-directional 4-cycle diesel engine Type ER6M, developing 300 b.h.p. at 660 r.p.m. (12-hour rating), driving a size 14E Voith-Schneider cycloidal propeller manufactured by Brown Brothers of Edinburgh. The combined speed and steering control pedestal is fitted in the wheelhouse, so that manœuvring of the vessel is under the Master's direct control.

there is little demand, to reduce the price of a stamp to a copper or two. But because there is a world-wide interest in this particular stamp, owing to it being the world's first, good copies of quite common plates (there are eleven plates, some much scarcer than others) bring into the teens of shillings. Yet, on the other hand, there are stamps which were issued as long ago as the middle of last century which still can be obtained for a penny or so. So to repeat, don't build up hopes that because you have a stamp which you know to be old it is, *ipso facto*, a valuable item. Alas, it is generally nothing of the kind.

THE HORN OF AFRICA

I still get collectors of British Colonial stamps asking what has happened to British Somaliland, for while, since the second world war, country after country has gained what some of them euphemistically describe as freedom, all but one have remained attached in some way or another to the Commonwealth. The exception is the ex-British protectorate situated in what is often called the Horn of Africa (a glance at the map will show why). There are two Somalilands, British and Italian, and on gaining their "liberty" they joined up, and the capital of the latter territory, Mogadiscio, took over for all.

Of course then the stamps began to flow, and while none will appear in British Commonwealth catalogues, having farmed out the agency, soon erstwhile British Somaliland will have issued as many new stamps through its new post office as it had previously done since it first released its own stamps almost 60 years ago. New Somaliland stamps are very attractive, but I think collectors will be better advised if they stick to the issues which do come into Commonwealth classification, as people soon get tired of a country which issues new sets of stamps every few weeks, with one main object—sales to philatelists.

TURKEY FOR TULIPS

One of the most popular subjects with thematic collectors is flowers, and one of the most popular flower sets issued recently came from Turkey. It is a beautiful set, and one of the values, depicting the rose, gained a very high place in a competition held in France to select the best designs of 1960. The rose stamp was certainly attractive, but I have selected that showing tulips as the most appropriate, for although we in Britain look upon Holland as the home of this popular flower, it is Turkey which claims it as its own; for not only is it that country's national flower but it is said to have originated there. It certainly grows there in wild profusion, as I have seen for myself. Mind you, those wild tulips are not fine big blooms, as are the couple depicted on the stamp, but nevertheless they have all the grace of wild flowers, which has little connection with size.

LAST YEAR'S GAMES

The Olympic Games of 1960 are to most people a thing of the past, but not to stamp collectors, who are still busy buying the various sets issued by countries who took part, and who didn't! (like Maldive Is., etc.). It must be admitted that some of the designs of these stamps are so attractive that it will be some time yet before they are finally consigned to our albums and thereby forgotten. Take, for instance, the stamp illustrated here. It is one of a set from Liberia (printed in the U.S.A. by the firm responsible for the scarce "Black Star" set of Ghana). I do like the athlete in the foreground, with the inference that his prowess was perhaps developed by his job of carrying heavy baskets, with arms uplifted. An interesting design, don't you think? Well, there are many others just as good among the "Olympic Games" issues of last year and, by the way, readers who got their sets while the stamps were current have probably done quite well for themselves, as some of the stamps have gone up quite a bit in price.

WORTHY CAUSES

As has been remarked repeatedly, our own Post Office needs an awful lot of prodding before it consents to issue any

(*Continued on page 110*)

By E. W. Argyle

Locomotives On Stamps

IN May 1955, France commemorated the opening of the 25,000 volt A.C. line between Valenciennes and Thionville by the issue of a 12 F. stamp showing one of the Bo-Bo type electric locomotives employed on that line. On March 29, 1955, another type of French electric locomotive, No. CC 7107, hauled three coaches weighing 100 tons, reaching a speed of 205.6 miles an hour on a 50-mile stretch of line south of Bordeaux. Top speed was maintained for nearly one and a quarter miles, thus breaking the world's speed record for railways.

An engine of the Swiss type "S.P.B. C5–6" is shown on the stamp above. Thirty of these locomotives were built between 1913 and 1917, at the Winterthur Engine Works, and they were the most powerful steam engines ever built in Switzerland. Their numbers were 2901–2, 2951–78, and the first two were also given names. They were first employed on the Gothard Line and were later used on other services.

DIGGING BENEATH A LAKE

Uncovering Ore In The Canadian Backwoods

A "GOLD RUSH" with a difference is taking place today in the backwoods of Western Ontario. Individual prospectors and miners no longer make fortunes panning the rivers and streams for gold. Instead, the great steel companies of Canada and the United States are spending millions of dollars to reach iron ore buried beneath this wild, barren forest and lake country.

First find of iron ore was by a Red Indian nearly 80 years ago. As he was travelling past what is now known as Steep Rock Lake he noticed iron ore in small quantities along the edge of the lake. It was not a profitable discovery however.

By R. J. SALTER

The wild, partly-mapped country could only be reached on horseback or by foot in the summer months. During winter the forests were deep in snow and the lakes and rivers frozen over.

From time to time pioneering geologists investigated the Steep Rock Lake area. They found that at a depth of about 500 feet below the water surface were rich deposits of high quality iron ore.

As time passed, the demand for steel increased and U.S. iron ore deposits began to be exhausted. By 1945 steel producers thought it worth while to tackle the tremendous job of pumping out the lake and digging through all the silt and mud in the bottom to reach the iron ore.

Engineers studying how best to do the job decided to kill two birds with one stone. Not only would they pump out the water in the lake but with the lake water they decided to pump the silt deposits as well. This was done by dredging. Huge floating dredgers were brought overland by railway and highway to the shores of Steep Rock Lake. Here they were assembled and began their task.

Working in the Falls Bay area of the lake two dredgers have been churning the mud up from the lake bed and pumping it into two giant three-foot diameter steel pipes. These pipes carry the mud and water overland for nearly four miles before discharging it into another lake. The mud settles out and then the water which has been pumped with it flows back into Falls Bay to be used again in the dredging process. It has been calculated that before all the iron ore in Falls Bay has been uncovered, each drop of water in this section of the lake will have been pumped through the pipeline ten times.

Out of this section of Falls Bay alone the silt removed from the lake bottom amounts to three-quarters of the dredging necessary in the construction of the Panama Canal. Records show that it took twenty dredgers ten years to build the Panama Canal. At Falls Bay, it should take the two dredgers only half this time. The two vessels there are each 176 feet long and 50 feet wide, and weigh 900 tons. Power to churn up the lake bottom, then pump it to shore through a floating pipeline, is provided by 10,000-h.p. electric motors.

For the past five years both machines have been working night and day, often in a winter temperature as low as 50 degrees below zero. Between them they pump 60,000 gallons of water every minute, gradually uncovering the valuable iron ore beneath the water.

Soon, giant excavating machines will descend into the dried-up lake bed. On either side of them the steep rocky lake walls, which gave the lake its name, will tower above them. Small specks in a great natural hole in the earth these mighty machines, helped by explosives, will bite away at the iron ore. Dump trucks will then carry it across the lake bottom to a crushing plant. The crushed ore will be lifted out of the lake and into railway trucks by conveyor belt.

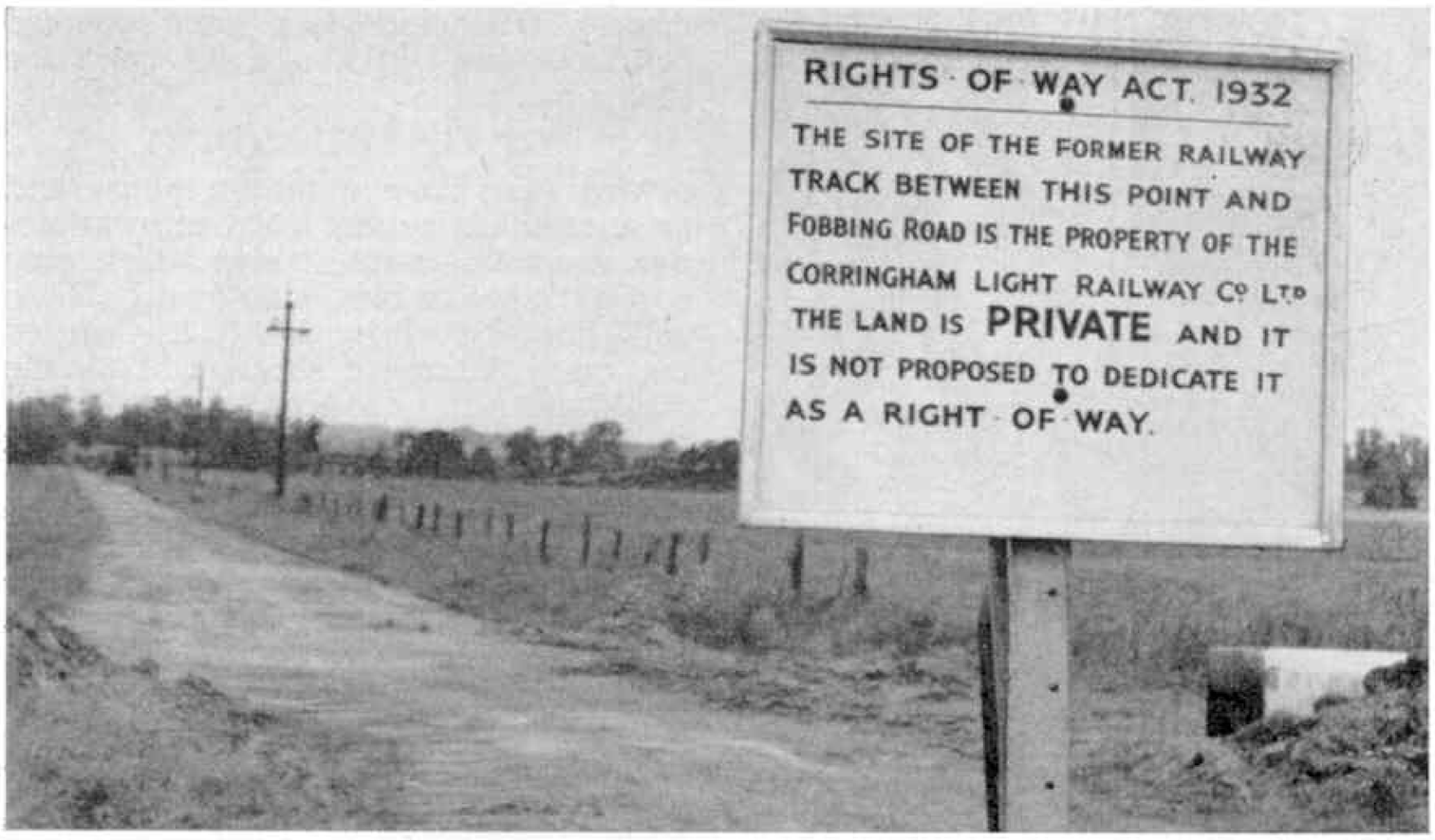
To reach the steel furnaces of Canada and the United States the heavy freight trains will move the ore across the backwoods to the shores of Lake Superior. From there, boat and barge will take it to the steel furnaces.

When the last of the iron ore is uncovered, enough lake sediment will have been dredged away to fill a line of dump trucks stretching two and a half times round the world.

Through these two steel pipelines (right) silt and boulders from the Lake are pumped for miles overland. As the boulders rush through the pipes, they rapidly wear them away, and the picture shows a new section of pipeline being placed in position. (Below) One of the dredgers (extreme left) at work. The trees at the top of the picture show the original height of the water level.

FROM OUR READERS

A Disused Railway Line: Trinity House Landmark


RIGHTS OF WAY ACT 1932
THE SITE OF THE FORMER RAILWAY TRACK BETWEEN THIS POINT AND FOBBING ROAD IS THE PROPERTY OF THE CORRINGHAM LIGHT RAILWAY Co LTD
THE LAND IS PRIVATE AND IT IS NOT PROPOSED TO DEDICATE IT AS A RIGHT OF WAY.

WITHOUT the presence of the notice board (seen above) you would never believe that the gates just in front of the board had been level crossing gates and that, until March 1, 1952, a railway had passed that way.

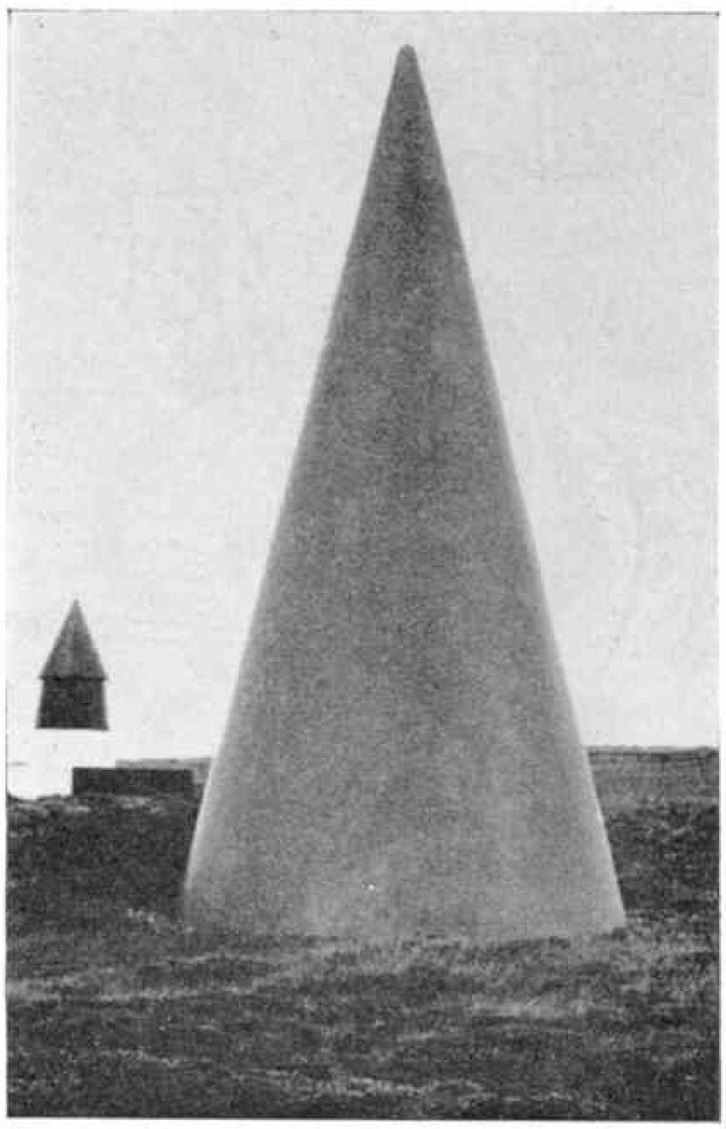
Quite isolated in the Essex marshes, the Corringham Light Railway began functioning on January 1, 1901, for goods traffic and later, in the same year, for passenger traffic. It was kept busy in the 1914 war carrying munition workers and munitions, but when the factory—on the bank of the Thames—closed little traffic remained.

The line ran from the village of Corringham to Coryton on the north bank of the Thames, a distance of 2¾ miles. Coryton, re-named after the oil refining firm of William Cory & Sons, Ltd., had before been called Kynochtown, after the Birmingham firm of Kynochs who had established an explosives industry in that area.

It was a very modest railway and strangers to the district always said that Corringham Station was hard to find, for it consisted only of a long brick platform and shelter. There were no signals on the whole of the line, although Corringham boasted a run-round loop for the locomotive. From Corringham Station the line pursued a straight course over the lonely marshes to Coryton, now a vast area of gleaming oil refining tanks.

The journey took about eight minutes and paper tickets that were marked 1½d., but cost 2½d., were sold by the driver. The rolling stock at the time of closure consisted of an 0–6–0 saddle tank and an old London, Tilbury and Southend four-wheeled coach, the compartments of which had wooden seats.

The line was closed on March 1, 1952, as it was losing money. Although the rest of the track has been lifted, there is still a small portion of the line in use at the Coryton end. This is the half mile of track from the junction of the Thames Haven line to the Mobil Oil Refinery at Coryton, built in 1950. It is worked by diesel. C. BETTS (Chadwell Heath).



To warn of danger—a Cornish Landmark.

THE NEW M.M.

Congratulations on the new M.M. *have been arriving at the Editorial Office ever since the Magazine made its appearance in the shops and on the bookstalls at the beginning of the year.*

One of the first tributes came from Mr. Ian Allan, a director of Ian Allan Ltd., publishers, of Hampton Court, Surrey, who wrote as follows: "Having just received a copy of the January issue of the Meccano Magazine, *I feel I should like to write and compliment you on its new format, and return to its former splendour. I am sure that this new size will prove popular."*

Here are other comments from the many received:

"Hearty congratulations on the issue of the splendid January issue of M.M. *Members all over the world will benefit from its new scope". —Charles P. Harris (Chairman, Kidderminster Model Railway Club). H.R.C. Branch No. 560.*

"As one of your older readers of the Meccano Magazine *may I say congratulations on your new presentation of that Magazine. It is a winner all the way."—John H. Caff, Horley, Surrey.*

"I must congratulate you and your staff on the new and enlarged Meccano Magazine. *Having been a reader of the Mag. and also a Meccano enthusiast for 25 years, I must say that it is grand to see the Magazine bigger and better than ever. I may add that my wife derives a lot of pleasure from reading the Magazine, too."—R. F. Barham, Ashbourne, Derbyshire.*

"I am 11¼ years old and enjoy reading the Meccano Magazine *very much. I like the bigger Magazine a lot more than the other one."—Paul Carter, Limpsfield, Surrey.*

ON a visit to Cornwall, walking along the path from Porthgwarra towards Tol-Pedn-Penwith, I was surprised to see two objects which from a distance appeared to be space ships. At first I was not sure whether the Martians had landed on a lonely part of the Cornish coast or whether I had found a secret rocket site. As I drew closer, however, I found out that these structures, which bear quite a resemblance to creations of present-day science fiction, were, in fact, erected over 100 years ago by the Corporation of Trinity House as landmarks. They warn shipping of a dangerous rock, the Runnel Stone, which lies a little distance from the coast at this point.

DAVID C. BRYANT (Bristol).

The House that Downing Built—

(*Continued from page 75*)

"*On two of these occasions the company was forced to withdraw into a neighbouring shelter by the air bombardment of the enemy.*"

It is certain that whatever reconstruction is carried out No. 10 will always retain its glorious history and cherished tradition, and will continue steadfastly to cope with the many problems imposed by a swiftly-changing world.

Keep on the Right Side of the Track—

(*Continued from page 77*)

heavily insulated against noise and heat.

And there is no reason why you should miss those trains. But wherever you wait, on a bridge, or by the lineside—on the *right* side of the fence—you need to look out for them, for they are fast and quiet. Even the drivers of these trains, who have forsaken the sometimes hot and dirty footplate in favour of the comfort of a diesel cab, are having to adjust themselves to the smoothness and silence of a new high-speed travel.

But it is not only the trains that are getting quieter and need to be watched on British Railways. The noise and clatter is disappearing in other fields of railway operating. The metallic clang of signal arms is heard less and less as colour light signalling goes in. Even the modern signalbox is quieter, for the signalman has small switches to operate instead of long, heavy levers in a noisy frame. The job is done silently and quickly at the touch of a button.

The yardmaster, who once needed the voice and lungs of a sergeant-major to make his instructions heard, now controls marshalling lines with electronic "magic eyes". Shunting, always recognised as a noisy operation, is now getting less noisy as the loose-coupled goods wagons gradually disappear. The ring of the shunter's pole is heard less as more electronic equipment takes over the braking and shunting of wagons. The familiar "clickety-clack" is also disappearing from railway travel, as the standard 60-ft. lengths of rail are replaced with continuous stretches of rail up to three miles in length.

Certainly, there are new and exciting things happening on British Railways, but see them in safety. The speed of the new diesel and electric trains can be deceptive. Enjoy train spotting from the best vantage point—the right side of the fence.

The Bailey Bridge—

(*Continued from page 91*)

August 5, and the "Freeman" bridge was open to traffic two months later.

Another famous Bailey bridge, built over the Chindwin River, in Burma, was 1,153 feet long. Apart from the normal problems of constructing the bridge the materials had to be transported many miles over jungle roads.

Chambers Encyclopaedia describes the

"Ha, ha, very funny!"

Bailey Bridge as having been built on "Meccano Principles".

Sir Donald Bailey, interviewed recently, stated, "I certainly used Meccano as a boy and it undoubtedly contributed towards making me adopt an engineering career. How far it contributed to my thoughts on bridges in particular is more problematical."

Whatever role Meccano may have played in the design of the Bailey Bridge it certainly encouraged the boy to follow an engineering bent which not only brought him world-wide recognition, but played a significant part in the final victory of the Allies.

The Big Rock—(*Continued from page 105*)

As for the first QEII issue which has just been replaced, there are no perforation varieties, but there are several good shade variations. The Commonwealth QE Catalogue lists shades of the 2½d., 3d., 4d., 5d., 6d., 1/– and 2/–, so there is plenty of fun to be had looking for these colour variations. Make sure that you get the 2/– value (orange and red-violet, instead of the normal orange and violet) as it is quite a scarce stamp.

Stamp Gossip—(*Continued from page 107*)

special stamps, but it must also be admitted that when it *does* agree, no stone is left unturned to see that such stamps are as attractive as possible. It is a pity, therefore, that they get amateurs on the job of designing, with usually moderate results. But if the Post Office does drag its feet over such things (and as a collector I would rather have it that way than see it go to the other extreme, as do so many foreign post offices) Belgium, as a case in point, quite frequently issues new stamps and attractive ones, too. For instance, every year a set (among others) is released with each stamp showing an additional charge over the franking value and the extra revenue goes to the funds of the "Defence against Tuberculosis Society"

—a quite nice arrangement. The Post Office collects the face value of the stamps; the society the surcharge, and collectors get the stamps if—and, alas, there is a catch in it—they foot the bill for the lot. One of the stamps of the last issue of six, which appeared on December 6, 1960, is shown on page 107. The designs depict occupations suitable for victims of the disease. The cause is a good one, so collectors don't mind the bit extra for such a nice set.

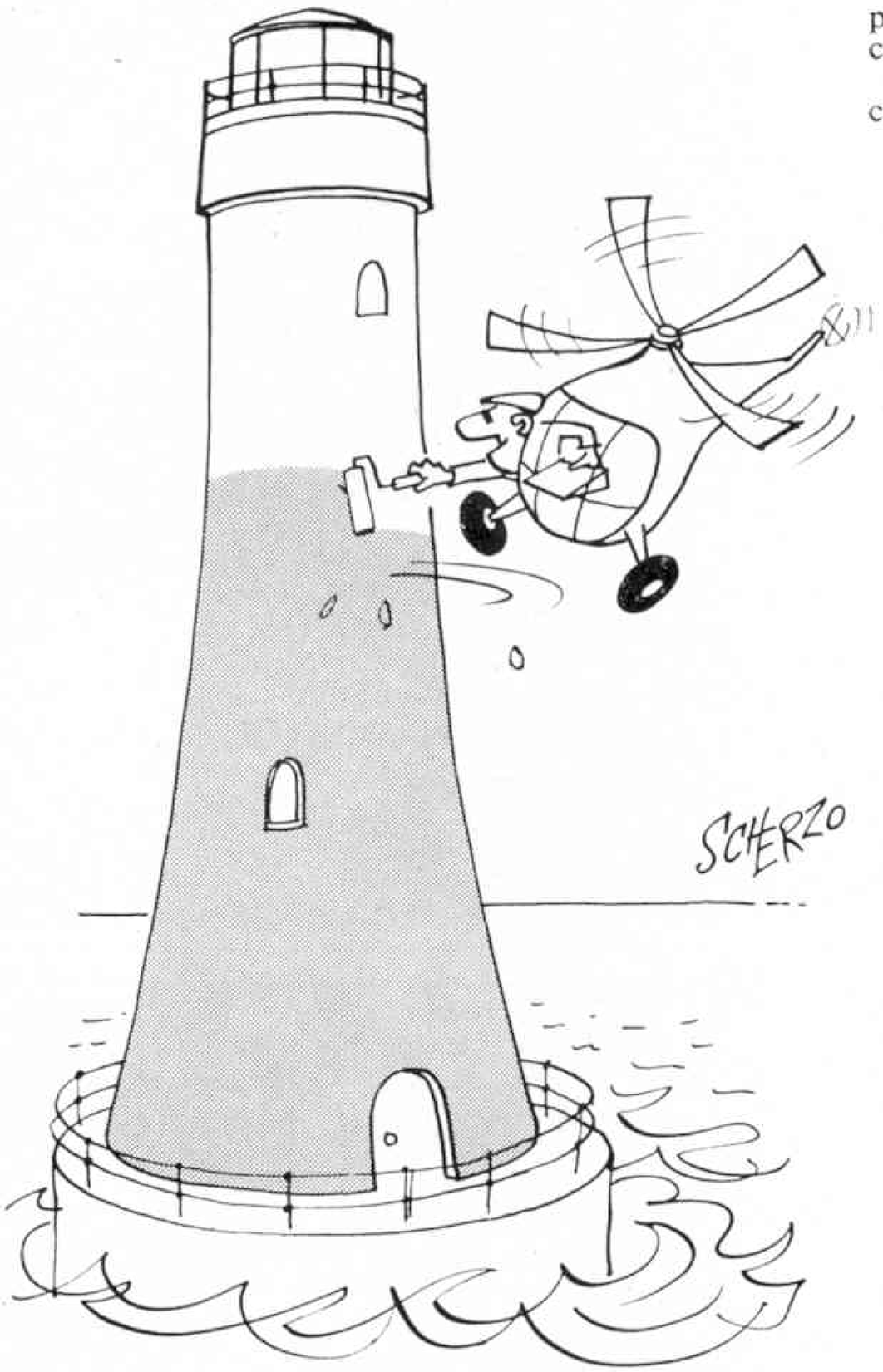
TIP OF THE MONTH

Most of us like a lot for our money, and as Australia is issuing many most attractive commemorative stamps which only cost a copper or two, what about a little collection of such items? Nicely written up, many attracitve sheets will be the result, and you only need to spend a few shillings to get something worth showing to your friends. Used stamps are generally the cheapest, but if you go in for these don't forget—*only* nicely-cancelled copies, or they will not be worth showing to your enemies, let alone your friends. Readers in Australia and New Zealand have there, at their disposal, a wonderful little Australian Catalogue which only costs 2/6, and nothing could beat it as a guide to the collection I have suggested.

ANSWER TO "JUDGE FOR YOURSELF"

What had happened that day, said the judge, was within the legal definition of a riot, i.e., more than three persons had combined for an unlawful purpose and had behaved violently. By Act of Parliament, where damage was caused by rioting, the local authority had to pay compensation out of the rates. So everybody in the town was made partly responsible for the trouble.

Fireside Fun



First Tramp: What happened when you asked the cook for some pie?

Second Tramp: I received a tart reply.

* * * *

Employer: What I want is a smart boy, who is alert and intelligent. Are you quick to take notice?

Boy Applicant: Yessir—'ad it three times in a fortnight once.

* * * *

Man (to Doctor): What can I do to this boil at the back of my neck?

Doctor: Nothing much, but keep your eye on it.

* * * *

Teacher: Tommy, give me a sentence with the word intense.

Tommy: Last year I went to camp with the Scouts, and we slept in tents.

* * * *

Mistress to Maid: You must take great care of the pictures in the dining room. That small one of a beggar cost £2,000.

Maid: Lor' ma'am, my mother got a picture of the whole Royal Family for two shillings.

"—Enjoy it?"

Rambler: Is it far to the next village?

Yokel: Well, it seems further'n what it be, but it bain't.

* * * *

Answer to last month's Brain Teaser.

The Missionaries and Cannibals crossed the river as follows:

At the first crossing one Missionary and one Cannibal crossed.

At the second crossing the Missionary returned and took another Cannibal across.

At the third crossing the Cannibal returned, leaving the Missionary with the first Cannibal, and took another Missionary across.

At the fourth crossing the Cannibal returned and took the last Missionary across.

At the final crossing the Cannibal returned and took the last Cannibal across.

Dinky Toys News—(*Cont. from page 89*) they were introduced under the name "Modelled Miniatures" and were really a range of accessories for Hornby Trains. Until 1931–32 they were limited to trucks, seats, items of luggage, platform machines, etc. Then, in 1932–33, came the introduction of figures for use with Hornby Trains. These were made in sets and included passengers, station staff and train staff. There was, additionally, a set of farmyard animals.

In 1933–34 motor vehicles were introduced, and soon afterwards the name "Dinky Toys" was adopted and the variety of models was greatly increased.

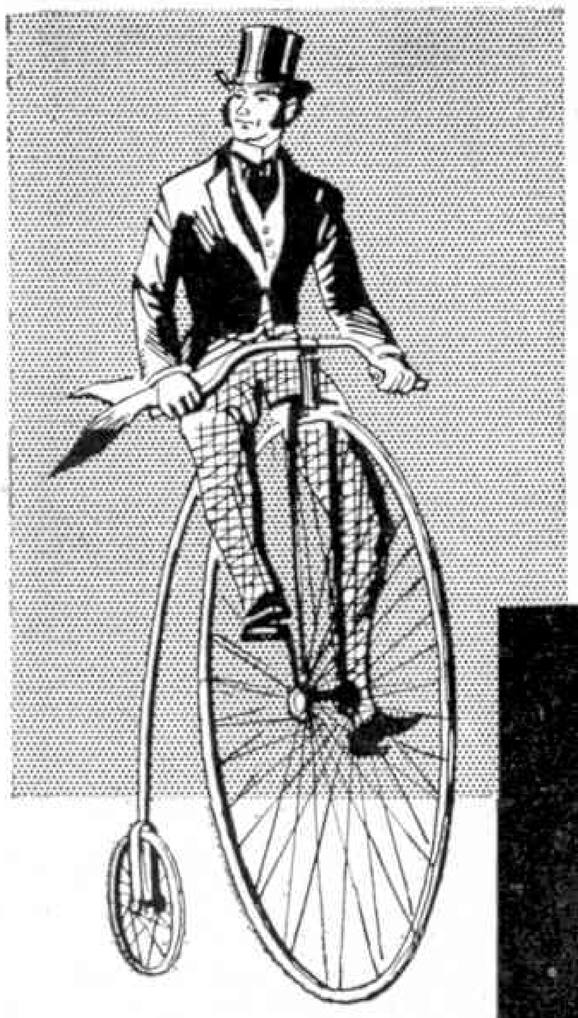
Since 1935 there has been continued development in both the accuracy and variety of Dinky Toys. The Bentley released this month shows just how successful this development has been and how much progress has been made over the years.

Singer Gazelle—(*Continued from page 90*) *brought forth the Singer Gazelle, an 80 m.p.h., 1½-litre car designed to set new standards of luxury and quality at its price. The current model, the Gazelle IIIB, is available in three body styles, saloon, convertible and estate car, at prices ranging from £848 to £978. A version with automatic transmission is also available.*

In many ways the Gazelle is the modern counterpart of the original Singer 10, which—its makers claimed—was the first light car in the world.

(The Dinky Toys model of the Singer Gazelle is No. 168. Fitted with windows it is 3 $\frac{11}{16}$" long and costs 2/11d.)

"Sis said you'd got your wings—I must say they suit you!"



HOW TIMES HAVE CHANGED

In 1872, it was not uncommon to see people riding bicycles with front wheels over 5 ft. high and rear ones less than 1 ft. in diameter. These were the famous "Penny-farthings"! The cyclist sat high up over the pedals which were attached to the front wheel. With solid rubber tyres, they were, to say the least, uncomfortable machines.

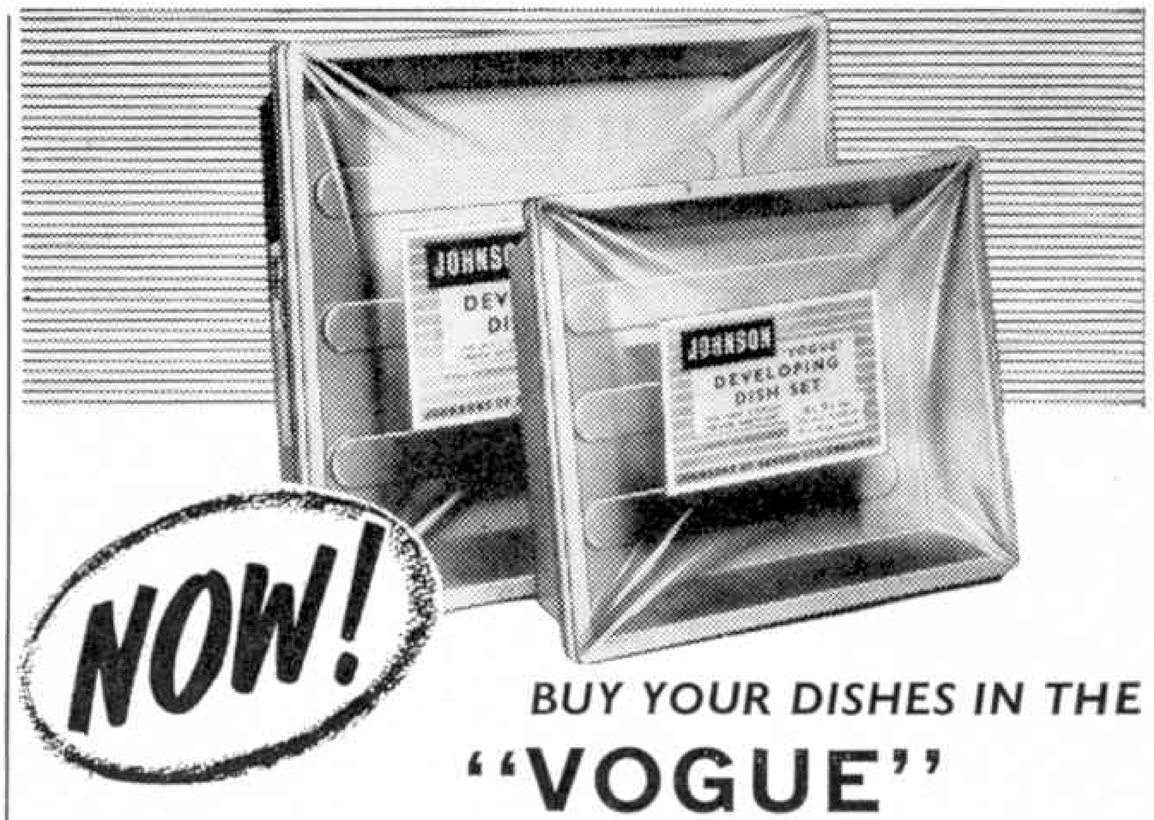
Today's bicycles are sleek, handsome and, above all, comfortable. In 1888 John Boyd Dunlop invented the first practical pneumatic tyre, a device which has made cycling safer and more comfortable for all of us.

DUNLOP

SYMBOL OF PROGRESS

Have you seen the new Dunlop film "Mend that Puncture"? Shows you how to do it! Available on free loan from Dunlop Film Library, Wilton Crescent, Merton Park, London, S.W.19. For 16 mm. sound projectors only.

CFH/PR6/35



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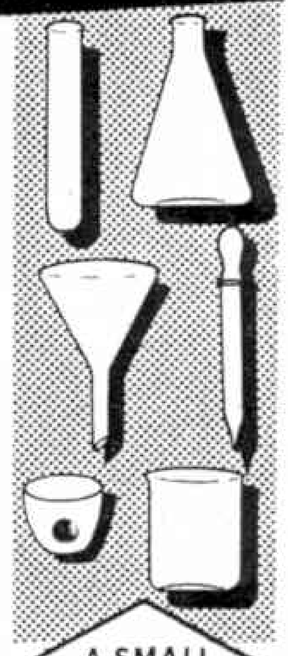

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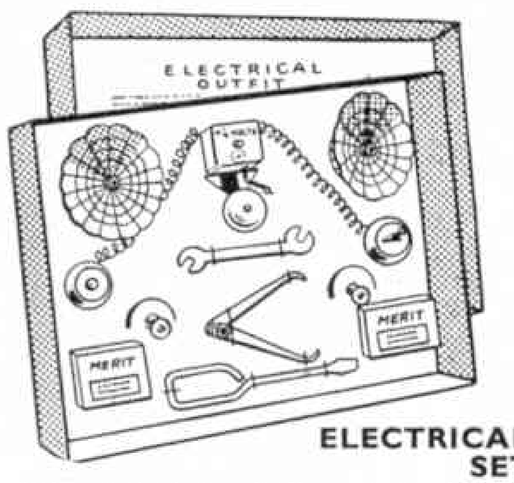

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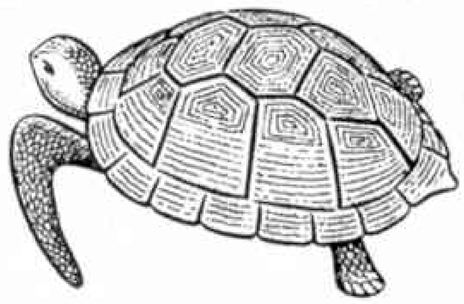

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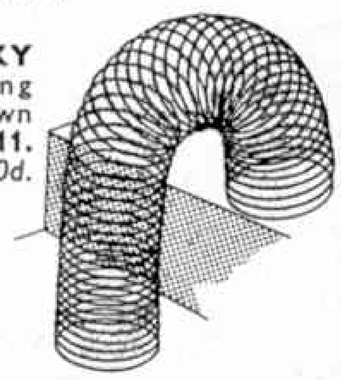

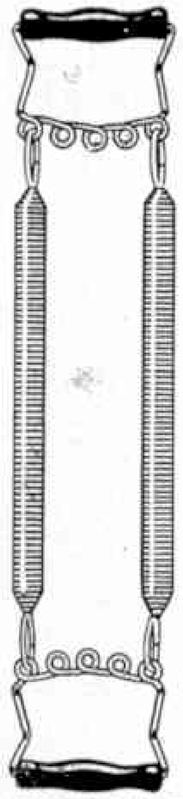

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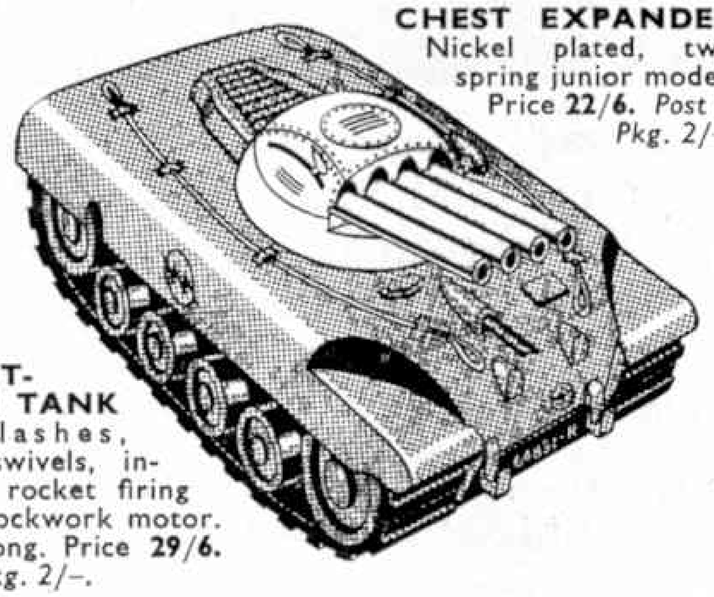

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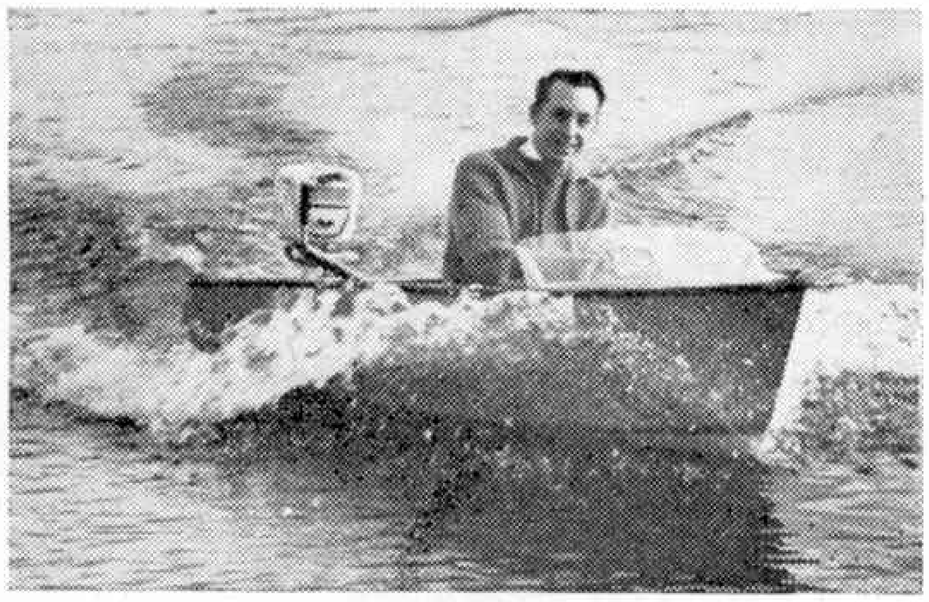

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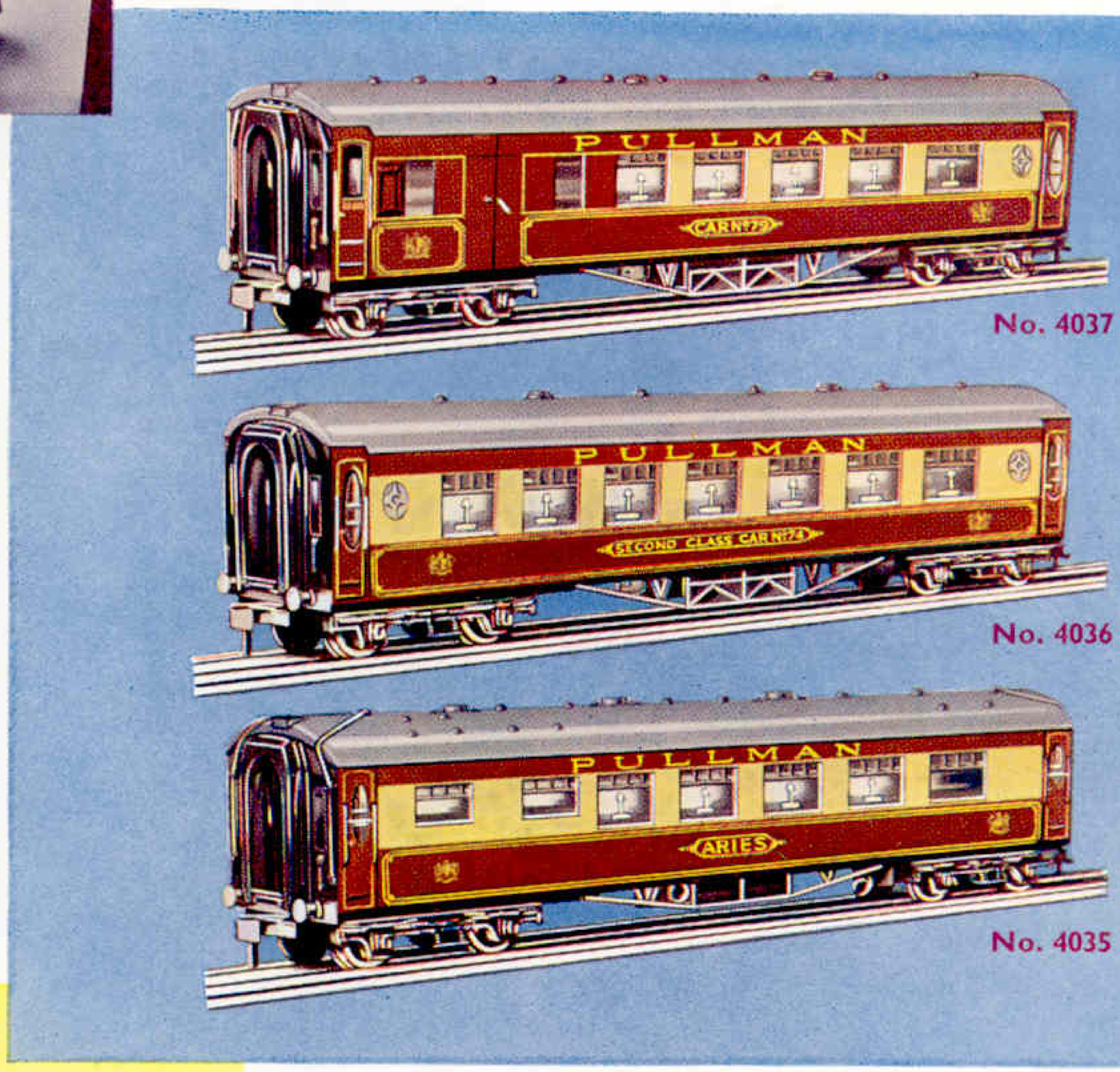

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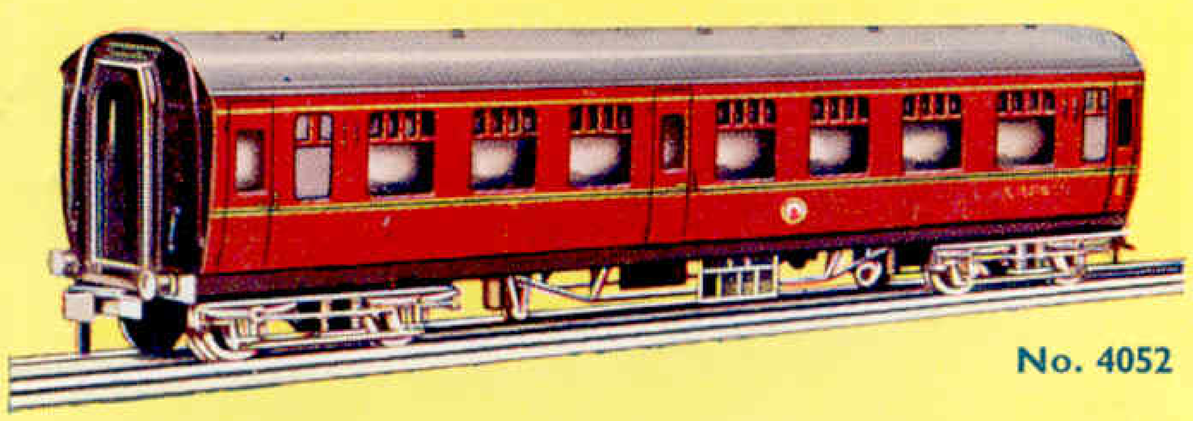

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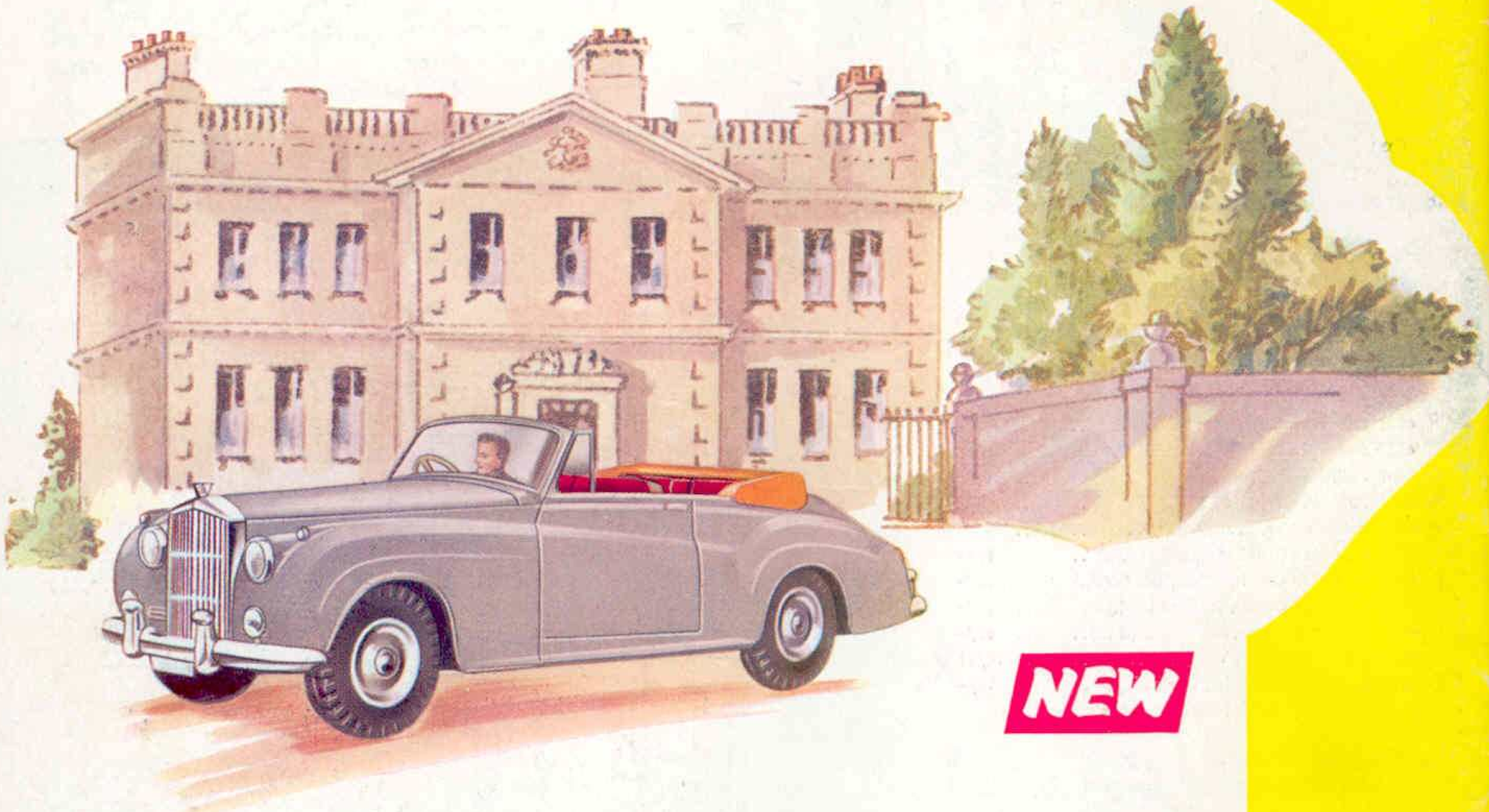

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